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CHEMIST AND DRUGGIST

ESTABLISHED 1859

THE WEEKLY NEWSPAPER FOR PHARMACY
and all sections of the drug, pharmaceutical,
fine chemical, cosmetics, and allied industries

*Official organ of the Pharmaceutical Society of Ireland
and of the Pharmaceutical Society of Northern Ireland*

Volume 187

May 20, 1967

No. 4553

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C&D

CHEMIST AND DRUGGIST

Volume 187

MAY 20, 1967

No. 4553

Towards Freer Trade

NATIONS AGREE ON TARIFF REDUCTIONS

IN the biggest-ever move towards freer world trade, agreement was reached in talks (known as the Kennedy Round talks) at Geneva on May 16 between the major trading nations of the world.

The negotiations, which have lasted four years and have involved repeated clashes between the European Economic Community and the United States, have been based on a working hypothesis of 50 per cent. tariff cuts across the board, and in many areas that hypothesis is being put into practice. Preliminary estimates suggest that the average weighted reduction in industrial tariffs will be of the order of 33.35 per cent. In the chemicals sector the fight has centred on the so-called "American selling price rules," which inflate the already high American import duties on benzenoid chemicals, notably dyestuffs, and certain drugs. The Common Market countries have insisted that "A.S.P." should be abandoned, even though that means special Congressional approval. In doing so, they have withheld a part of their own chemical tariff cuts, intending to implement them only after "A.S.P." has effectively been repealed. In the end the participants moved towards agreement on far more extensive chemical tariff cutting than had initially been envisaged by either side. The U.S. will make 50 per cent. tariff cuts on all chemicals and the Common Market, for its part, which had initially proposed excluding many of its chemical tariffs, from the 50 per cent. linear cut, decided to put virtually all its chemicals on to the 50 per cent. rule. Finally, the United Kingdom, which is also interested in abolishing "A.S.P.," agreed to make average cuts of 56 per cent. in chemical duties with a final ceiling of 10 per cent. for plastics.

Damage From Fire

WORSENING RECORD OF SHOPS

A BLACKPOOL department store fire on May 7, estimated to have cost about £1 million, spotlights the mounting threat of fire to retail premises, says the Fire Protection Association. Already this year, over thirty shops and stores have been badly damaged in outbreaks each costing £10,000 or more. The Association adds that the number and cost of fires in the distributive trades is rising more sharply than in

any other type of business. The move to larger, open-plan areas, housing more goods has provided greater opportunities for big fires in stores. Main starting points for fires in shops are: misuse of electrical apparatus and wiring; carelessness with cigarettes and matches and malicious ignition.

Exporting to the U.S.

"EFFORT SHOULD BE CONCENTRATED"

"EFFORTS by the Government and other bodies to increase United Kingdom exports to the United States (now running at £600 million a year), would bring greater results if they were concentrated on a few major categories, instead of being spread thin, as they now are, over the whole spectrum." That was one of the conclusions of the British Export Marketing Advisory Committee set up by the British National Export Council in New York early in 1965 to formulate proposals to strengthen the marketing of British goods and services in that country. Of chemicals (£18 million exported to U.S. in 1965), the report acknowledges the hard task of competing against the giant manufacturers in the United States as well as the competition from

Germany and Japan. After defining the methods used by British firms the report concludes "These operations are in sophisticated hands and leading producers can be counted on to expand turnover wherever possible."

Health Services Council

PHARMACEUTICAL ADVISERS NAMED

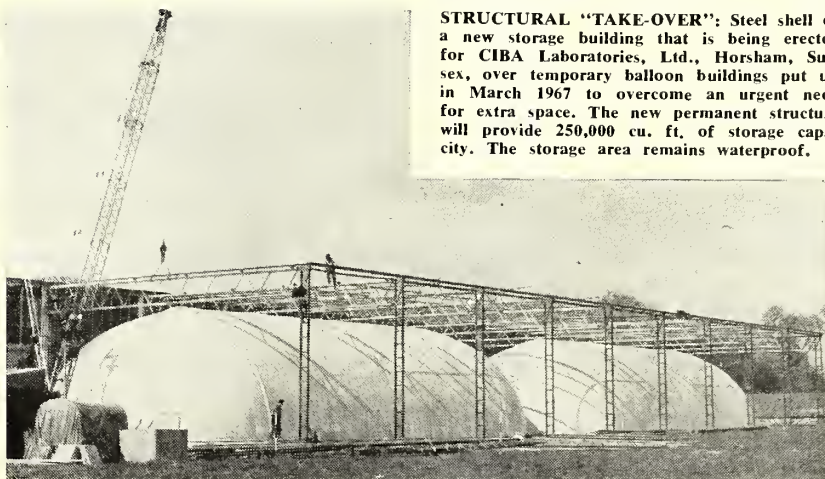
THE Ministry of Health announces that Mr. A. G. Fishburn, F.P.S., F.R.I.C., has been newly appointed to the Pharmaceutical Advisory Committee of the Central Health Services Council. Reappointed to that Committee for the period ending March 31, 1970, are Messrs. H. Steinman, O.B.E., M.P.S.; E. J. Fitchett, M.P.S.; B. J. Thomas, F.P.S.; J. Wright, F.P.S., and Dr. M. Latner, Wembley. Mr. Steinman has also been reappointed to the Council itself.

Conference on Quality

25 COUNTRIES SEND REPRESENTATIVES

TWENTY-FIVE overseas countries are sending representatives to London for the annual congress of the European Organisation for Quality Control, June 6-8. Among the 800 delegates expected will be Japanese in two teams from chemicals and engineering and delegates from Spain's pharmaceutical industry. The conference is being organised by the British Productivity Council with the support of the National Council for Quality and Reliability. Already, more than two-thirds of the available places have been taken and early application is strongly advised (though

STRUCTURAL "TAKE-OVER": Steel shell of a new storage building that is being erected for CIBA Laboratories, Ltd., Horsham, Sussex, over temporary balloon buildings put up in March 1967 to overcome an urgent need for extra space. The new permanent structure will provide 250,000 cu. ft. of storage capacity. The storage area remains waterproof.



there can be no guarantee of acceptance) to the British Productivity Council, Vinty House, Queen Street Place, London, E.C.4.

Biological Research

ASSOCIATION'S GROWTH SINCE 1959

THE 1966 annual report of the British Industrial Biological Research Association (B.I.B.R.A.), refers to the increase in scale that has taken place since the first plans for the Association were made seven years ago. Capital cost of the laboratories was then estimated at £75,000 but in the event they cost over £333,000 and are to be extended this year at a further cost of £60,000, providing total space of 30,000 sq. ft. Recurrent annual expenditure increased from an estimated £40,000 to £148,000 in 1966. Instead of a staff of twenty-four, as originally planned, eighty are now employed. The increases were made deliberately by the council as its understanding of industry's requirements grew. Revenue

in 1966 was £199,000, of which £67,000 was subscribed by industry. In addition to the basic research programme, which is principally intended to increase knowledge of the modes of operation of the detoxicating mechanisms of the body, the Association has undertaken many safety evaluation tests on materials selected by members for their importance to industry.

D.D. Authorities

NAMES WITHDRAWN AND RESTORED

THE Home Secretary (Mr. Roy Jenkins) has withdrawn the authorities to possess, supply or prescribe Dangerous Drugs from Paul Coling M.B., B.S., Arbadic, Chidham Lane, Chidham, Chichester, Sussex, and has restored to Joseph Anatole France Tobin, M.R.C.S., L.R.C.P., Welwyn Garden City, Herts, his authorities to possess and supply Dangerous Drugs.

[The list in the *C. & D. Diary and Year Book*, 1967 (p. 231) should be suitably amended.—EDITOR.]

STATUTORY COMMITTEE CASES

Some adjournments but no penalties

THE Statutory Committee of the Pharmaceutical Society considered eight cases when it met on May 5.

One case was a resumed inquiry concerning a pharmacist who had embezzled £270 from his employers and had been placed on probation for two years, a condition of the probation being that he should repay the money to his former employers. At the resumed hearing SIR BENJAMIN ORMEROD (chairman) told the pharmacist the Committee felt it could not let the matter go until the money had been repaid, and adjourned the inquiry for another three months. He added "If the money is repaid, perhaps it would be simpler if you would inform the secretary of the Committee that it has been paid. We can then decide what further steps we might take, possibly without your coming here."

Another pharmacist who had been admonished by a sheriff court after pleading guilty to selling tablets of dexamphetamine sulphate not in accordance with a prescription, was told by SIR BENJAMIN that there were many unsatisfactory features about the case, but in the circumstances the Committee proposed to adjourn the matter for six months.

The Committee also considered a case of a pharmacist aged sixty-two who had been guilty of embezzlement. After hearing evidence on behalf of the pharmacist, and also from a probation officer, the Committee decided to adjourn their decision for twelve months.

In another case, after being informed that a pharmacy was being carried on satisfactorily, the chairman dismissed the inquiry.

Two other inquiries considered by the Committee concerned sales of poisons by corporate bodies not "effected by or under the supervision of a registered pharmacist." In both cases the Committee decided to take no further action but the chairman gave

warnings that repetition of the offences would lead to serious consequences.

After listening to evidence and explanations concerning sales of Soneryl tablets that had resulted in a pharmacist's being fined £10 on each of two offences, the chairman said that the Committee were dissatisfied with the explanations given but realised that the pharmacist was in difficulties for which he could not be held to blame. The inquiry was adjourned for six months.

The Committee finally proceeded to the resumed inquiry concerning a pharmacist whose company had pleaded guilty of offences under the Pharmacy and Poisons Act, 1933, and had been fined £6, with £30 9s. costs. The Committee had begun the inquiry twelve months previously. MR. J. PEPPITT, who appeared in order to place the facts before the Committee, said that a telephone call had been put through to the pharmacist and it had been established he was "not on his way," and nobody had appeared on his behalf. After Mr. Littler (the Society's inspector) had been examined by Mr. Peppitt, SIR BENJAMIN ORMEROD said the Committee had considered the case and taken a serious view of it. "This man was warned in language which I think was sufficiently clear last time and he has not obeyed the regulations with the strictness we would like. In fact, we think he has fallen short in many ways, but we propose not to remove his name from the register this time but to adjourn the matter for another six months and give him an opportunity of coming again. In the meantime, we hope that the visits by the inspector will continue as before, and we do hope that next time—and it will be to his good if he does—he will have the courtesy either to appear or to send somebody on his behalf or communicate with us."

IRISH BREVITIES

THE NORTH

PRESCRIPTIONS dispensed in Northern Ireland during February numbered 851,467 (549,130 forms). Total cost was £498,599, an average of 140.54d. per prescription.

THE REPUBLIC

MR. M. J. O'Shaughnessy, M.P.S.I. whose pharmacy is in Mary Street, Dublin, has been elected *President* of the Photographic Dealers' Association of Ireland.

NEWS IN BRIEF

MR. F. STEWART has succeeded Mr. S. J. Gregory as *Secretary* to the Poisons Board.

A FURTHER title "Principles of Osmotic Phenomena" by J. F. Thain (price 8s.) has been added to the Royal Institute of chemistry's Monographs for Teachers series.

WOMEN who expressed a preference for a man's razor in tests conducted by *Which?* preferred the Gillette (men's) razor, and not as stated in THE CHEMIST AND DRUGGIST, May 13.

THREE pharmacist candidates were successful in the recent local authority elections in Scotland. In Edinburgh Messrs. L. A. Bailey and G. Hedderwick were elected and in Stirling Mr. T. Clark.

AS part of the follow-up drive, to the "Britain 66" trade promotion held in Oslo in 1966 two full-scale store promotions are being organised this year in Norway's second city, Bergen, October 6-14.

AMONG reappointments to London teaching hospital boards announced by the Minister of Health are Mr. C. A. Chadwyck-Healey, O.B.E. (chairman, Morgan-Grampian, Ltd., publishers of THE CHEMIST AND DRUGGIST) and Mr. W. K. Fitch, F.P.S. (formerly an assistant secretary, Pharmaceutical Society).

A SAMPLE of fluoride tooth-paste examined by the Birmingham city analyst (Mr. A. H. Coombes) was shown to contain 8.5 per cent. undeclared calcium fluoride in addition to the declared 0.6 per cent. sodium fluoride. Mr. Coombes is corresponding with the manufacturer on the necessity of incorporating "this considerable amount of a second fluoride" in such a product.

THE Association of British Manufacturers of Agricultural Chemicals has issued a revised booklet showing the provisions of the Pharmacy and Poisons Act, 1933, and the Poisons Rules, 1966, relating to the sale of insecticides, fungicides, weedkillers and rodenticides. Copies can be obtained from the offices of the Association, Alembic House, 93 Albert Embankment, London, S.E.1, price 5s.

RESOLUTIONS for the creation of a new combined body are being considered by members of the British Paper and Board Industry Research and the Printing, Packaging and Allied Trades Research Associations at extraordinary general meetings in London on June 29. It is proposed that P.A.T.R.A. should change its name, its objects be-

ing modified to cover the functions of both Associations. B.P.B.I.R.A. will transfer its assets to the new organisation (see *C. & D.*, December 10, 1966, p. 558).

APPLICATIONS are being invited for the Carlsberg-Wellcome and Wellcome-Swedish travelling research fellowships, 1967-1968, whose object is to encourage working visits, on an exchange basis, between investigators from the respective countries in any branches of the natural sciences bearing upon medicine. Inquiries from United Kingdom candidates should be addressed to the Assistant Secretary, The Wellcome Trust, 52 Queen Anne Street, London, W.1. Applications must be submitted by June 16.

SPORT

Golf

LONDON CHEMISTS' GOLFING SOCIETY. The Society's meeting at Moor Park golf club on April 27 was a visitors' day and attracted a good turn-out of members and guests. Results: (Medal) *Mentholatum prize*, G. Smith (12), 70. *Thomson cup and prize*, J. G. Evans (18), 70 (Stableford) *Hepburn shield*, W. N. Cockburn (10—1), 34 points. *Visitors (Stableford)*, P. Weston (11), 36 points; Dr. Stockham (20), 36 points. The club has vacancies for new members, who must be either pharmacists or directly connected with the wholesale or retail chemists' trade. Applications should be made to R. J. Boulderstone, c/o Glastics Limited, 9 Salisbury Road, Barnet, Herts.

MANCHESTER PHARMACEUTICAL GOLFING SOCIETY. A competition was held at Dunham Forest and Country club, on April 26 when play was for the *Members' prize*. Results: 1, R. Evans and J. Kemp; 2, Dr. A. Noar and B. Jenkins.

SOUTH LONDON AND SURREY PHARMACEUTISTS' GOLFING SOCIETY. Fifty-four members and guests were present at the Society's outing at Woodcote Park on May 10. Results: *Widocks Memorial trophy*, 1, G. Jamieson (Croham Hurst) (18), 35 points; 2, A. Reary (Croham Hurst) (9), 33 points; 3, F. Jamieson (Shirley Park) (10), 33 points. *Scratch to fourteen handicap prize*, G. Stanton (Royal Blackheath) (12), 32 points. *Bobby Locke trophy* (fifteen and over handicap), G. Howell (Banstead) (15), 32 points. *Best score on first nine holes*, K. Piddington. *Best score on last nine holes*, H. W. Dempsey. *Visitors' prizes*, 1, K. Bolton (Mid-Kent) (16), 37 points; 2, T. Lewis (Shirley Park) (14), 34 points.

LOCAL OFFICERS

PHARMACEUTICAL SOCIETY

Dewsbury Branch.—*Chairman*, Miss S. Ellis; *Vice-chairman*, J. Walker; *Treasurer*, W. L. Horsman; *Social secretary*, Mrs. B. Jefferson; *Secretary*, T. B. Chapman, 24 The Town, Thornhill, Dewsbury, Yorks.

West Hertfordshire.—*Chairman*, J. C. Cox; *Vice-chairman*, J. V. Tapster; *Treasurer*, R. W. Pattison; *Programme secretary*, J. D. Robinson, 30 Catherine Street, St. Albans; *Secretary*, Mrs. E. B. Winder, Briggside, Roughdown Road, Hemel Hempstead, Herts.

PHARMACEUTICAL COMMITTEES

Somerset.—*Secretary*, H. M. Lovell Mitcheldean, 22 Totterdown Lane, Bleadon Hill, Weston-super-Mare, Somerset (Tel: Bleadon 551). [Corrected note.]

GUILD OF PUBLIC PHARMACISTS

London.—*Chairman*, J. D. Fennell; *Treasurer*, Miss E. M. Brighton; *Secretary*, J. B. G. Parker, Pharmacy, East Ham Memorial Hospital, Shrewsbury Road, London, E.7.

CHEMISTS' ASSOCIATIONS

Enfield.—*President*, A. Wade; *Vice-president*, J. D. Tombs; *Treasurer*, R. E. Salmon; *Social Secretary*, A. G. A. Garrett; *Secretary*, M. Millward, 14 Apple Grove, Enfield, Middlesex.

TOPICAL REFLECTIONS

By Xrayser

Stress

The Nottingham Branch of the Pharmaceutical Society (p. 438) is to be commended for its enterprise in bringing together, with the co-operation of a large manufacturing organisation, such a varied selection of speakers to deal with the subject of the stress of modern living. Obviously one day was all too short for a full examination of the problems, which are many and varied, and Mr. A. H. Robinson was right to point out that stress was not in itself a modern phenomenon. It had existed, as he said, in past ages, with violence, poverty and disease as the predominating causes. Violence in some form has always existed, and there is no denying, as Sir Hugh Linstead stated, the effect of two world wars, both of which completely sundered the pattern of life for millions of people, by killing and maiming, by bereavement and deprivation. But, as Mr. Robinson emphasised, poverty and disease were also factors in the past, and those who have completed even fifty years of life have experienced or witnessed the dire effects of both. I would agree with Professor Harrison in his view that noise is one of the greatest evils of modern society, but even that is not new when one thinks of the mills and the shipyards before any attempts were made in the direction of noise abatement. And poverty and poor living conditions, and sporadic employment followed by long spells of unemployment, while existing to this day, though to a lesser degree, could not fail to leave their mark. But the main stresses of today have different origins, though I would place persistent and shattering noise in our city streets high on the list. And it may be that a greater degree of affluence has led to commitments of a financial nature that go beyond the bounds of prudence, in which the income and expenditure accounts are run as fine as by Wilkins Micawber, with little sufficing to convert a balance sheet from a condition of happiness to one of misery. So-called "easy" payments can change their character with a change of wind, and if that is not in some part the cause of stress in modern living I shall be surprised.

The Victorian Era

I am not sure that I understand what Sir Hugh Linstead had in mind when he said that the Victorian era was one of certainties which, during the present century, had been replaced by fear and doubt, though I acknowledge the effects of the two world wars on my own and later generations. Certainties there may have been in the nineteenth century, but they were not generally of a kind to bring about freedom from stress. There was the certainty of death from many diseases now almost non-existent. There was the certainty of recurring outbreaks of cholera. There was the certainty of poverty for the millions when their working usefulness was over — but it is only necessary to read the works of the social observers of the time to appreciate that easy living was only for the few. We hear little of the effects of stress in the nineteenth century, for the doctor was called only in the last extreme. Today, the stresses are brought to light, and attempts are being made to find a solution.

Dissent

I was interested to note that the Council of the Pharmaceutical Society had had their attention drawn to a statement made in 1937 by the then vice-president in regard to public dissent by members of Council from accepted policy. One of the points of interest was that the lapse of time had not affected the validity of the statement. I seem to remember a resolution made about the same time in relation to premises fees that was not accorded the same authority when mentioned a year or two ago. For whatever reason the statement has been revived, it appears to be apposite, if only for the reason that three Council members — candidates for the election that will have taken place by the time these words appear — indicated their reaction to the Society's appeal to the House of Lords. Two were unfavourable. They may have been displaying their "freedom of continued opposition," but it seems a pity that the Council meeting reports should be so uninformative.

IN PARLIAMENT

DURING the six months to April 30, the Ministry for Economic Affairs received about 9,000 complaints alleging unjustifiable price increases. MR. FREDERICK LEE (Chancellor of the Duchy of Lancaster) told MR. WILLIAM HAMLING on May 11 that the great majority of the complaints related to increases that had either been justified or had occurred before the July standstill.

Patents System

In a written answer on May 10 MR. DOUGLAS JAY (President of the Board of Trade) told MR. BENJAMIN C. WHITAKER it had been decided to appoint a departmental committee to examine and report and make recommendations upon the British patent system and patent law in the light of the increasing need for international collaboration in patents matters. The Minister also announced that Mr. Maurice Banks (until recently deputy chairman and managing director, British Petroleum, Ltd.) had agreed to act as chairman of the Committee.

Coronary Thrombosis and Sugar

MR. ARNOLD SHAW questioned the Secretary of State for Education and Science about evidence of a link between the increased consumption of sugar and the growing incidence of coronary thrombosis and whether he would support research in that field. MR. ANTHONY CROSLAND (Secretary of State, Education and Science), in a written answer on May 3 pointed out that several scientific papers had been published suggesting the possible link. A Medical Research Council party was currently investigating the question, and related studies were in progress in M.R.C. establishments and university departments.

LEGAL REPORTS

Interlocutory Injunction Refused

THE High Court refused on May 12 to grant an interlocutory injunction, pending trial of an action, to Olin Mathieson Chemical Corporation, E. R. Squibb & Sons, Inc., both of Park Avenue, New York, Smith Kline & French Laboratories, Spring Garden Street, Philadelphia, and Smith Kline & French Ltd., Welwyn Garden City, Herts, to prevent Biorex Laboratories, Ltd., Exmouth Market, London, E.C.1, and Dr. Siegfried Gottfried, Chelmsford Gardens, Ilford, from manufacturing trifluoperazine. Mr. Justice Lloyd-Jacob said that the patent office had granted to Messrs. Biorex a compulsory licence from the Smith Kline & French patent to make the substance. Olin Mathieson and its wholly-owned subsidiary Squibb had another patent which covered the same substance, and Messrs. Olin and S.K.F. had an arrangement for cross exclusive licences, both having patents in the same field. Messrs. Biorex had attacked the validity of the Olin patent on the ground that it was too wide, and that it seemed that the number of compounds covered could be many millions or even billions. The number was so astronomical

as to be regarded as formidable enough to prevent an interlocutory injunction of the licence granted by the Comptroller General of Patents. Costs would be reserved.

COMPANY NEWS

Previous year's figures in parentheses

D.D.D. CO., LTD.—Mr. J. Richard Jones, F.C.A. (company secretary) has been appointed to the board of the parent company and the subsidiary, Dendron Distributors, Ltd.

BOVRIL, LTD.—Group loss was £72,670, after all charges and tax, (compared with a profit of £283,961). The dividend is maintained at 12 per cent., with a final of 8 per cent. Trading profit, £518,724 (£1,060,352) carry forward £565,675 (£547,955).

NICHOLAS PRODUCTS, LTD.—Mr. F. Razzell has been appointed joint managing director (marketing). Mr. Razzell joined the Aspro-Nicholas group fifteen years ago. He was made a director of Nicholas Products, Ltd., in June 1964 and of Askit, Ltd., in January 1967.

ASHE CHEMICAL, LTD.—Group net profit in 1966 rose to £320,640 (from £232,193). A final dividend of 17 per cent. makes the total 29 per cent., against the previous equivalent of 28.6 per cent. Another 1-for-4 scrip issue is proposed. Taxation, £109,031 (£87,091); net profit, £211,095 (£145,102); retained to £179,444 (£125,996).

EUCRYL, LTD.—External group sales in 1966 rose to £2,848,548 (£2,399,126) and pre-tax profits to £402,076 (£368,527). The dividend is effectively held at 12 per cent. While a mild winter has resulted in demand for N.H.S. products and winter lines being less than expected, overall sales of the Eucryl Group are higher and chairman (Sir Edward Howard) looks forward with confidence to 1967. Expansion is continuing, and, as it is not intended to cut back on advertising, if necessary holders may be invited to subscribe for additional capital, possibly in the form of a loan stock.

RECKITT & COLMAN HOLDINGS, LTD.—Confidence in the continued growth of the group is expressed by Chairman (Mr. B. N. Reckitt) in his annual review. The Indian devaluation and difficulties in the U.S. during 1966 "prevented the rewards of genuine progress from being reaped in the shape of increased profits" in that year. Profits arising from trade in the U.K. and the Republic of Ireland were £5.3m. (against £5.2m.) while those arising from overseas trade from the U.K. were £7.4m. (£7.6m.). Exports from the U.K. at £6.35m. were virtually unchanged.

For preliminary figures see *C. & D.*, May 13, p. 441.

SAVORY & MOORE, LTD.—Agreement has been reached on terms of an offer under which Savory and Moore, Ltd., would become a member of the Fine Fare (Holdings), Ltd. group. Fine Fare will, subject to the usual conditions make an offer of 10s. cash for each of the 2.25m. Ordinary 5s. units of Savory & Moore on the basis that the stock will be acquired with the right to all dividends or distributions declared or paid after May 12. Savory & Moore directors intend to accept in respect of holdings which they own or control totalling approximately 15 per cent. of the Ordinary capital and recommend the offer to other holders. Fine Fare does not at present intend to make an offer for the £636,000 Preference stocks of the company. Consolidated profits before tax for the year ended March 31, 1967 are expected to show an improvement over the previous year. Fine Fare confirms that it intends to continue the existing businesses.

BOOTS PURE DRUG CO., LTD.—World sales for year ended March 31 increased to £150,887,000 (from £142,843,000) while group profits before tax but after charging depreciation and interest fell to £14,876,951 (£15,234,357). Tax charge is £6,033,718 (£5,688,955) leaving net profits of parent at £6,416,829 (£6,146,553). Proposed final dividend is 8 per cent. making a total of 14 per cent. for year (same). The profit earning bonus for



NEW OFFICES VISUALISED: An artist's impression of the proposed new head office building for Kodak, Ltd., at Hemel Hempstead, Herts (see *C. & D.*, April 1, p. 312).

the staff charged in arriving at the profits is £1,378,696 (£1,415,213); depreciation charged amounted to £3,266,903 (£2,923,187) and selective employment tax paid in the seven months to March 31st net after deducting premiums receivable amounted to £695,000. The fall in the year's profit occurred in the two months January and February when the exceptionally mild weather affected the traditional chemist business severely and brought with it a corresponding fall in the amount of N.H.S. dispensing.

Creditors' Meetings

WHOLESALE SUPPLY (SUNBURY), LTD., Station Road, Hampton Wick, Middlesex.—Liabilities totalling £23,553, including £21,091 owing to trade creditors, were shown in the statement of affairs of the company at a recent meeting of creditors. Book value assets of £12,919 were estimated to realise £7,663, leaving a deficiency of £15,890. After discussion, creditors resolved to confirm the voluntary winding-up with Mr. R. P. Booth, 1 Wardrobe Place, Carter Lane, London, E.C.4, as liquidator.

UPLANDS PHARMACY, LTD., 122 Miller Drive, Fareham, Hants.—In its first year's trading to June, 1966, the company lost £1,782 and in the subsequent period to March 28, 1967, incurred an estimated trading loss of £1,592, creditors were told recently. Mr. R. F. Rudgley (director) told creditors that at the end of 1964 he and his wife were considering opening a pharmacy at Fareham, but before doing so made numerous inquiries as to the likelihood of such a business on a new housing estate succeeding, and after receiving information that a doctor's surgery would be opening in the vicinity, and that further, a road opening was likely to take place connecting two fairly large housing estates, it was decided to go ahead with the formation of the company. Neither the surgery or the road opening took place and the turnover for the first year reached £4,700 only. The turnover increased during the following six months but in view of the heavy overheads, including the salary of a full-time chemist, it was found impossible to carry on without additional capital. Efforts were made to dispose of the business but without success and as a result of pressure by creditors, the directors, on advice took steps for liquidation and the business ceased to trade on March 25. An approximate statement of affairs disclosed liabilities of £6,114, against net assets of £1,190, leaving a deficiency of £4,924. The appointment of Mr. R. P. Booth, 1 Wardrobe Place, Carter Lane, London, E.C.4, as the liquidator was confirmed.

BUSINESS CHANGES

ALBERT HAGON, LTD., have acquired the pharmacy of Mr. R. O. L. Evans, M.P.S., Fairwater, Cardiff.

ROBERT DICKSON (CHEMISTS), LTD., 116 New City Road, Glasgow, C.4, are to close the business from May 27.

MR. N. R. WALLING, M.P.S., has acquired the business of Alun Cunah & Co., Ffynnongroew, Holywell, Flint.

THE SOCIETY OF COSMETIC CHEMISTS OF GREAT BRITAIN has moved to 56 Kingsway, London, W.C.2 (telephone: 01-242 3800).

MR. R. F. EAKINS, M.P.S., has acquired the branch pharmacy of M. D. Godfrey (Chemists), Ltd., 44 Hamlet Court Road, Westcliff-on-Sea, Essex.

BEECHAM ETHICAL DISTRIBUTORS are moving their offices to Beecham House, Great West Road, Brentford, Middlesex on May 22 (telephone: 01-560 5151).

Appointments

IZAL, LTD., Thorncliffe, Sheffield, have appointed Mr. G. L. Unsworth, their brand manager.

MAWS PHARMACY SUPPLIES, LTD., Aldersgate House, Barnet, Herts, have appointed Mr. P. Davis their factory manager.

D.C.M.C. GROUP, appointed Mr. R. Lawrence their group technical director to co-ordinate the Group's aerosol packing and chemical manufacturing activities.

JACKEL & CO., LTD., Kitty Brewster Estate, Blyth, Northumberland, have appointed Mr. G. Manning their sales manager for the Eastern side of England.

RADIOL CHEMICALS, LTD., Stepfield, Witham, Essex, have appointed Mr. G. H. Marsh their representative to cover Bedfordshire, Essex, Hertfordshire, Middlesex, and London postal districts north of the Thames.

EXPANSION PROJECTS

WORK on a major expansion of phthalic anhydride capacity has been started by Laporte Industries, Ltd., at Stallingborough, Lincs. The process to be utilised will be based on ortho-xylene.

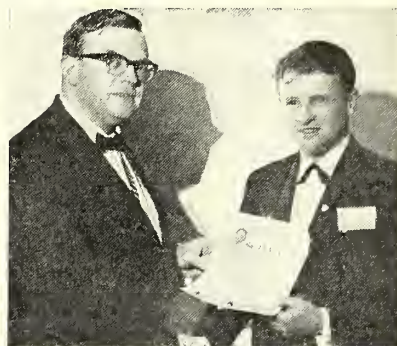
THE new factory of Laboratori Glaxo, S.p.A., the Italian subsidiary company of Glaxo Group, Ltd., was opened in Verona on May 10. Situated alongside the main Milan-Venice autostrada, La Serenissima, the £750,000 factory is nearly three times the size of the company's former Verona plant. It stands on a 37-acre site, surrounded by lawns and gardens.

PERSONALITIES

PROFESSOR A. H. BECKETT, Department of Pharmacy, Chelsea College of Science and Technology, University of London, gave two scientific lectures at the fifth pharmacy seminar of the American University of Beirut, May 11-14.

MR. A. MATHESON, M.P.S., has been elected to the Stornoway town council. A native of the burgh, Mr. Matheson qualified from the Robert Gordon's Technical College in 1965. Though he was the youngest candidate and it was his first election, he topped the poll. In returning thanks to the electors Mr. Matheson paid tribute to the late ex-provost Smith, a pharmacist

who had done "so much for the town and who encouraged an interest in civic matters in myself."



AWARDED SENATORSHIP: Mr. T. F. Hassett, L.P.S.I., who has a pharmacy in North Main Street, Wexford, and is a director of Irish Pharmaceuticals, Ltd., was recently awarded a senatorship by the Junior Chambers of Commerce of Ireland. Mr. Hassett, the first Wexford man to gain the award, is being presented with the certificate by the national president (Mr. W. T. Morrow).

DEATHS

DARBYSHIRE. On May 13, Mr. Harold Darbyshire, M.P.S., F.B.O.A., 44 Sandringham Road, Hyde, Ches. Mr. Darbyshire qualified in 1927 and was in business at 37 Mottram Road, Stalybridge, Ches.

McLOUGHLIN. — Recently, Mr. John Joseph McLoughlin, M.P.S.I., Loughrea, Eire. Mr. McLoughlin served his apprenticeship in Killians' pharmacy, Loughrea, spent some time in the Dublin pharmacy of George Lynch in Churchtown, and qualified in 1963. Later he became a medical representative for Burroughs Wellcome and Co.

MURPHY.—On May 11, Mr. Harry Robert Murphy, Wilstone, Tring, Herts, aged fifty-three. Mr. Murphy was a sales promotion manager with Hoechst Pharmaceuticals, Ltd.

MURRAY.—On May 4, Mr. William Murray, M.P.S., 35 Galloway Street, Dumfries. Mr. Murray who qualified in 1909 was an original member of Dumfriesshire Executive Council, and secretary of the local Pharmaceutical Committee, serving from 1948 till the time of his death.

ROBINSON.—On April 9, Mr. Frank Brewin Robinson, M.P.S., Barrowby, Foley Road, Pedmore, Stourbridge, Wores. Mr. Robinson qualified in 1939.

STOTT.—On April 25, Mr. Victor George Stott, M.P.S., 147 Abbott Street, Sandringham, S.8, Victoria, Australia. Mr. Stott qualified in 1928.

WILTSHIRE.—On May 13, Dr. Samuel Paul Wiltshire, formerly director of the Commonwealth Mycological Institute, Kew, aged seventy-six. Dr. Wiltshire was largely responsible for a new building to house the herbarium and library. An important activity of the Institute is to abstract the world's literature on disease in plants, and he designed additional surveys of the geographical distribution of plant disease, fungal diseases of man and animals, new genera and species of fungi and publication of systematic mycology.

TRADE NOTES

Discontinued.—E. R. Squibb & Sons, Ltd., Moreton, Wirral, Ches, state that the tube of 5 gm. Tri-Adcortyl ointment is no longer available.

Antacid.—Maalox antacid suspension is a product of Rover-Berk, Ltd. Distributors are Berk Pharmaceuticals, Ltd., Godalming, Surrey [Corrected note].

A Stand for Hair Brushes.—The Royal Sweden stand of Jackel & Co., Ltd., Kitty Brewster Estate, Blyth, Northumberland, illustrated recently in these pages, was for Royal Sweden hair brushes and not as stated.

Now London - made.—Lawrence Edwards & Co., Ltd., Wellington Close, Ledbury Road, London, W.11, state that their super Drummond household latex gloves, previously manufactured abroad, are now being made in the company's new London factory, where they are producing, by modern techniques, a superior glove without any increase in price.

New and Coming Books.—E. & S. Livingstone, Ltd., 15 Teviot Place, Edinburgh, 1, have issued a new edition of their catalogue of medical and scientific books. Among those of pharmaceutical application are a new edition of "Oxidation — Reduction Potentials in Bacteriology and Biochemistry," by L. F. Hewitt, and a second edition of "Antibiotic and Chemotherapy," by Mary Barber.

Competitions

Prizes for Retailers.—Stockists of the Sparklets bulbs, British Oxygen Co., Ltd., Great West Road, Brentford, Middlesex, are operating once again their summer retailer-display promotion, consisting of a competition in which 200 prizes per month are given.

£1,000 Worth of Prizes.—In conjunction with Chesebrough-Pond's, Ltd., Victoria Road, London, N.W.10, *Honey Magazine* is running a special competition featuring Cutex "Young Love" nail-polish shades, especially the Young Love "Chick" shades. The competition involves matching the shades to a selection of rings. Entrants have the opportunity of winning between them £1,000 worth of prizes, including a week-end in London for the five first prize-winners. The June copy of the magazine went on to the bookstalls on May 16.

Holiday Closings

Spring Holidays.—During the Spring holiday most manufacturers will be closed from normal closing time on Friday, May 26 until normal opening time on Tuesday, May 30. The following have notified that urgent requirements may be obtained from John Bell Croyden, 50 Wigmore Street, London, W.1:—

PHARMAX, LTD., Thames Road, Crayford, Kent. UPOHNS, LTD., Crawley, Sussex.

The following special arrangements should be noted:—

IMPERIAL CHEMICAL INDUSTRIES, LTD., pharmaceuticals division, Scottish order office at

Earls Road, Grangemouth, Stirlings, open on May 29.

ROBINSON & SONS, LTD., Wheat Bridge Mills, Chesterfield, Derbys. Closed from 4.30 p.m. May 26 to Friday June 2 inclusive (reopening June 5). Small staff retained to deal with urgent matters.

Bonus Offers

MACDONALD & SON, LTD., Portland Mill, Ashton-Under-Lyne, Lancs. Nappi-Pak. Five 12-ft. rolls free with order for two cartons. For limited period.

F. C. PATON (SOUTHPORT), LTD., Southport, Lancs. Thum, fourteen invoiced as twelve.

Premium Offers

AGFA-GEVAERT, LTD., Great West Road, Brentford, Middlesex. "Grab bag" free to customers buying roll of Agfacolor Universal or Agfacolor CT18 film and sending empty film box, with special coupon bearing name and address, to the manufacturers. June 1 to June 7.

BEECHAM FOOD AND DRINK DIVISION, Great West Road, Brentford, Middlesex. Ribena. Acrilan cot blanket size 44 by 54 in. at a reduction of 10s. and the return two proofs of purchase.

GOYA, LTD., 161 New Bond Street, London, W.1. Goya deodorant antiperspirant compact. Two at saving of 5s. over price of two singles.

NICHOLAS PRODUCTS, LTD., Slough, Bucks. Radox. Offer of threepence off large, twopence off medium packs repeated for limited period.

RAYETTE-FABERGE, LTD., 457 Edinburgh Avenue, Slough, Bucks. 2-oz. Cologne spray in glass bottle with gold cap in "see-through" gift box at saving of 13s.

ROBINSON & SONS, LTD., Wheat Bridge Mill, Chesterfield, Derbys. Disposable nappies, "economy" size pack (thirty). Priced at 5s. (a saving of threepence to customer) while supplies last.

NEW PRODUCTS AND PACKS

OVER-THE-COUNTER MEDICINALS

Metered Throat Spray.—Menley & James Laboratories, Welwyn Garden City, Herts, are distributing nationally a product, Laryncol, that has been test marketed in Cardiff, Manchester and the Southern Television areas. Laryncol,



Information for Manufacturers

Consultants' Consortium.—Three consultants with experience in marketing and selling have formed a new company, Marketing Services (Birmingham), Ltd., Winchester House, Victoria Square, Birmingham 9, 2, to offer service in the marketing of chemicals, plastics, resins and rubbers.

Fractionated Coconut Oil.—E. J. R. Lovelock, Oaklands House, Oaklands Drive, Sale, Manchester, is offering fractionated coconut oil D (medium-chain triglycerides with low viscosity, non-oily taste and low solidification point) as a suspension medium for oral antibiotics, etc., and for improved fat-absorption diets.

Vitamins and Chemicals.—Ascorbic acid, folic acid, pyridoxine hydrochloride and aneurine hydrochloride and mononitrate are among chemicals of Japanese manufacture offered by Ferro Metal and Chemical Corporation, Ltd., Victoria House, Vernon Place, Southampton Row, London, W.C.2.

Synthesised Malt Flavour.—A synthesised malt flavour in powder form is offered by Soflor, Ltd., Perivale, Greenford, Middlesex. The makers claim that the product, P.F.W. malt dry flavour, is uniform in quality and instantly soluble in cold water. It is white in colour, without specks, non-hygroscopic, free-flowing, non-caking, non-caloric and does not present a medium for microbial growth. Apart from its obvious uses in the food industry, it is claimed to have many other applications, including the flavouring of tablets.

INFORMATION WANTED

The Editor would appreciate information about: Huberts Ferrometa Normadrex tabs

a throat spray containing cetylpyridinium chloride, has been devised as offering a convenient alternative to mouth-washes and gargles. Its container has a spray head with metered control so that the right dose may be applied to the right spot so as to bring rapid relief.

COSMETICS AND TOILETRIES

Non-lacquer Hair Spray.—Rexall Drug Co., 19 Castle Boulevard, Nottingham, have produced a new perfumed non-lacquer lanolin-containing hair spray that "holds the hair softly but firmly in place".

Lipstick in Gilt Case.—Guerlain, Ltd., 22 Aintree Road, Perivale, Middlesex, have launched a new range of gilt-cased lipsticks in twelve shades, plus four *Amandine*, *Cerise*, *Grenade* and *Sorbier* for sensitive lips.

Complexion Milk.—Andre Philippe, Ltd., 71 Gowan Avenue, London, S.W.6, have launched a new complexion milk (cleansing), delicately perfumed and formulated "to give gentle skin care." The fluted cylindrical bottle has a pale blue and gilt label and a pale blue cap.

A Lipstick Shade for the Summer.—Elizabeth Arden, Ltd., 25 Old Bond Street, London, W.1, have introduced for the summer months a new lipstick shade, "silver cinnamon," described as having the warm tones of spicy cinnamon shot through with silver.

French Perfume Series for U.K. — Inter-continental Cosmetics, Ltd., 31 St. George Street, Hanover Square, London, W.1, are introducing to the United Kingdom the Parisian Philippe Venet perfumes from Paris, which have been available on the Continent for several years. *Madame Venet* described as a sophisticated perfume for cocktail or evening wear, *Mademoiselle Venet* as lighter and more floral. Both products are claimed to have a "timeless, classical appeal."

Moisturising Foundation and Powder. — Chesebrough-Pond's, Ltd., Victoria Road, London, N.W.10, are introducing a complete matte make-up in their Angel Face range. The product is described as a blend of moisturised foundation and powder that gives the skin "a beautiful but bare look." It is available in natural, barest-beige, barest-brunette and barest-tan shades, and is packed in tubes in outer display carton (six of each shade) designed for hanging on the peg of a "dispenser" unit.

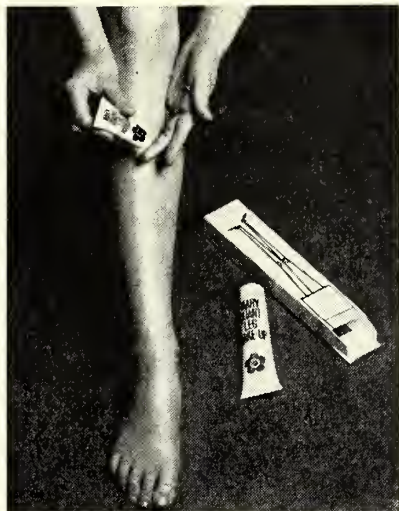
Skin Moisturiser.—Yardley of London, Ltd., 33 Old Bond Street, London, W.1, have launched a new treatment line: Velvet skin moisturiser. The product is a transparent lotion that flows rapidly on the skin and smoothes



quickly and evenly. Used during the day under make-up it acts as a hold to the make-up, also protecting the skin against cold and wind. Used at night it helps to smooth away lines. The moisturiser may also be used as an all-over body lotion, being quick and easy to apply and leaving behind no greasy feeling, "only silken softness" on the skin.

Leg "Shapers". — Mary Quant Cosmetics, Ltd., (distributors: Myram Picker, Ltd., Hook Rise, Kingston Bypass, Surbiton, Surrey), have introduced two new products to make the leg more

presentable "in 1967, the year of the leg" when "too many unlovely limbs are being revealed." The products are "Leg Make-up" and "Leg Hilight." Combined, they are claimed to give legs "the greatest look they have ever had, either under nylons or without nylons." "Leg Make-up" is presented



in a large tube (enough for more than sixty applications). It helps to hide marks, veins, bruises, "pore spots" and scorch marks from winter fires. The product is waterproof and, provided it is not rubbed too vigorously, stays on for as long as the wearer desires. To a degree, say the makers, the product is also smudgeproof, though a lot depends on correct application, so the directions on the carton should be carefully followed. "Leg Hilight," presented in a smaller tube, is a pearly gold cream that is worn over "Leg Make-up" to emphasize the boning of the calf and the centre of the thigh, making the legs look longer. Hilight also is waterproof and smudgeproof. The two tubes are sold together in a window carton and are available in both light and dark shades.

Additions to Series.—Rimmel Ltd., 140 Tottenham Court Road, London, W.1, have introduced a number of beauty products into their Rimmel series. They include a full-size lipstick in gold-and-white plastic container with push-up action and in fourteen shades; permanently curled eye lashes graduated for natural effect and sold complete with phial of adhesive; eye-shadow palette (four eye shadows in plastic compact with shaped brush and in silver/green/blue/gold colour scheme for evening use and amber/white/blue/green for daytime use); a brush-on mascara in white-and-gold screw-top plastic container plus spiral-shaped brush; a translucent compressed powder in gold-and-white plastic compact with washable foam puff; a transparent blush for accentuating features or giving an all-over colour to the complexion; a complexion brush in plastic tube; a cuticle remover of new formula; a "Number 3" perfume described as "the breath of flowers"; "Number 33", "Number 5" and "Number 21" perfumed Colognes; a hair colour for imparting "permanent"

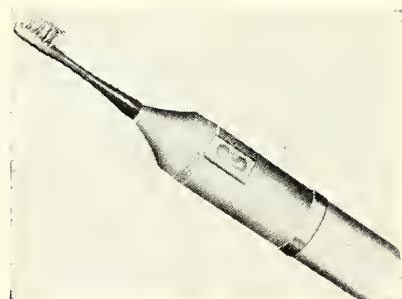
natural-looking colour to the hair, leaving it shiny, soft and manageable; a moisturised skin food; a cold cream; roll-on and spray-on deodorants; foam powder puffs in set of three; a hair removing cream; and an oatmeal complexion soap.

Colour "Cover-Ups." — As "little colour cover-ups for lips and nails," Estée Lauder Cosmetics, Ltd., 18 Davies Street, London, W.1, have introduced a "Honey Bare" series of nail enamels and lipsticks. The nail enamels cover the nails with one of four pale, semi-transparent colours permitting them to look "almost bare" yet beautifully polished. Described as being "neither creams nor frosted," the "Honey Bare" enamels are blended for "that light see-through effect." The four shades are honey pink, honey peach, honey banana and honey crème. A companion series of lipshades is in "Honeysparkle" rose, peach, ice and blush shades, each capable of being used alone or in combination with another.

Sun-screening Cream.—Scott & Bowne, Ltd., 50 Upper Brook Street, London, W.1, have made available a cream version of Skol that may be worn as a light summer foundation under make-up. The product is presented in handy plastic non-collapsible tubes.

SUNDRIES

Automatic Toothbrush. — The Rand automatic toothbrush of S. D. Rand, Ltd., 29 Beak Street, London, W.1, has a brush-head that oscillates at high speed and is claimed to massage the gums and clean the teeth more efficiently than is possible with an ordinary toothbrush. The Rand is battery-



operated and thus ready for use independent of a mains supply. There are two packs, each with four interchangeable, individually coloured brush heads. The kit No. 1, for travel use, is supplied in a roll-up vinyl case, the kit No. 2, for home use, in smart stand.

"Comfort" Pads.—New Dermatec comfort pads by Parke, Davis & Co., Staines Road, Hounslow, Middlesex, are made from double-layered reticulated polyurethane foam. Surface layer of the pad is smooth and soft-textured, aiding in the prevention of skin irritations and bed sores, while the resilient large-pore-base layer provides firm support for the patient. The two layers are flame-laminated and claimed not to tear or fray, though they may be cut to any shape. The pads are readily washed and sterilised for re-use by autoclaving, still retaining their physical properties.

Ideally suited for use in hospitals, clinics and nursing homes; the pads may also be used in oxygen tents and x-ray rooms. Each pad measures 24 x 30 in.

Packaging and Finish Improved.—The introduction of an automated packaging process at the Tottenham factory of the British Oxygen Co., Ltd., has led to improved packaging and finish on the C bulbs for the Sparklets

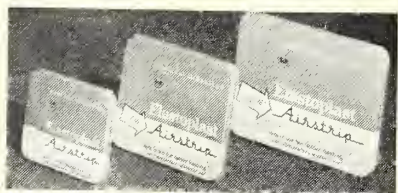


soda-syphon range. The pack is now a brighter-coloured carton containing ten, and the bulbs themselves are painted in an attractive green, with improved finish, instead of the previous black lacquer. The bulbs are available from British Oxygen Co., Ltd., Sparklets Products, Brentford, Middlesex.

"Revolutionary" First-aid Dressing.—Smith & Nephew, Ltd., Welwyn Garden, Herts, have made available to the general public a first-aid dressing "new" Airstrip by Elastoplast with the qualities that it is bacteria-proof, water-proof and air-permeable ("lets air in and



out through unseen pores"). The product has been pioneered in hospitals in this country and abroad for some years. It appears in a tin of the red colour that has come to be associated with Elastoplast products. Wounds covered with Airstrip dressings are, it is stated, protected from water and bacteria but air penetrates the film and its lattice-spread adhesive, so



that the wounds heal without the maceration caused by occlusive dressings. Airstrip is "unobtrusive to wear, sticks fast in water and the pad remains dry." The product is available in three sizes.

BRANCH EVENTS

LIVERPOOL

Poisonous Plants

"WHY is there a lack of general knowledge of plants that are poisonous?" asked DR. W. E. COURT (principal lecturer, School of Pharmacy, Liverpool Regional College of Technology), at a recent meeting of Liverpool Chemists' Association. One in ten of all poisoning inquiries at poison centres in the United Kingdom were estimated to involve plants (including fungi. That was more than involved industrial chemicals or pesticides. The problem was not peculiar to the United Kingdom, as was shown by statistics for the Colombia district of Puerto Rico: Cases in one year: 1,051; plant species involved 175 (fifty-one potentially fatal). Berries and fungi were the major problem in the United States, but in Britain only eight fatalities due to fungi had been recorded in the past twenty years, against an estimated fifty deaths per year in the United States. Two classes of people were particularly vulnerable. Children were attracted by berries, pods and seeds and people who tried to live off the land (for example campers) might mistakenly eat green and root poisoners for vegetables. (Effects of the poisons were not easily definable because the plants themselves varied considerably and the toxins were not necessarily distributed uniformly throughout the plant. Thus green parts of the tomato plant were poisonous, yet all enjoyed the red fruits.) There was no easy way of identifying the poison otherwise than by finding the agent. A hospital doctor suggested that, as a first aid measure, an early vomit was more valuable than a late washout, though it should be applied indiscriminately but only if the person could afterwards be sent to the hospital.

BOURNEMOUTH

Medicines Legislation Delays

SPEAKING at a recent meeting of Bournemouth Branch of the Pharmaceutical Society, SIR HUGH LINSTEAD said he had hoped to speak about a white paper on what new medicines legislation the Government had in mind, but the white paper promised some time ago, had not yet been produced. It seemed likely that the Government's interest in medicines had now cooled off. No Government, he pointed out, had yet tackled such legislation comprehensively. The first modern Act of Parliament in the field had dealt with the sale of arsenic, and even when, in 1868, pharmacists were brought into the picture, it was merely to protect the public against poisoning. Even so late as 1933 the best description that could be found for the business of a chemist and druggist was "authorised seller of poisons." In attempts over the past fifty years to unravel the tangle of legislation, the revisers were obviously working to separate the subject into three groups: Pharmacy, poisons and medicines. The Committee on the Safety of Drugs had recommended a voluntary scheme of control over all new medicines,

pending permanent legislation, and he regretted that because "nothing was more permanent than the provisional." He disliked Government and industry agreeing on extra-statutory arrangements of that kind. All such gentlemen's agreements ought to be ratified by statute, and the public money expended on them authorised by Parliament. The voluntary scheme, together with the early warning system for notifying unexpected reactions, had set back the demand for new legislation. It was likely, too, that the Chancellor's insistence that the Ministries should stabilise their budgets for 1967-68 would block the introduction of a Medicines Bill for a year or more. Replying to questions, Sir Hugh said that the pending report from the Sainsbury committee certainly provided a reason for delaying legislation. He criticised excessive morbid propaganda on addiction by the B.B.C., I.T.V. and the Press. He thought there was a danger that the training of dispensing assistants was being left too much to unco-ordinated initiative.

STOCKPORT

Saving Wild Life

"PRESERVATION of Wild Life" was the title of an address by SQUADRON-LEADER MEEK (North-west regional organiser, Preservation of Wild Life Society) to a recent meeting of Stockport branch of the Pharmaceutical Society. The speaker said that his Society was concerned with the preservation of species rather than individual specimens. Wild-fowling societies, by limiting their activities to a short season and discouraging unauthorised and haphazard shooting, had sometimes caused actual increases in the number of birds in an area. The talk was followed by a sound and colour film of activities at the British Wildfowl Trust, Slimbridge, Glos.

CORRESPONDENCE

An Outing Fully Booked

SIR,—The Blackpool Committee of the British Pharmaceutical Conference, 1967, regret that no further reservations can be accepted for the ladies' excursion No. 12 (visit to United Kingdom Atomic Energy Authority's Springfield works).

ALBERT S. SMITH,
Local Secretary,
Blackpool

Critic in More Than One Field

SIR,—I was asked to do the enclosed [a feature occupying 34 column inches of the *Kentish Independent*] at short notice, putting the case against Britain's entry into the Common Market so it is not as good or as original as it might have been. But you will see that I don't spend *all* my spare time pestering Lord Hill of Luton!

RAYMOND HUTCHINSON,
London, S.E.7

Poser Solution

THE prescription illustrated last week (p. 445) reads Tab. Midecal, 1 daily; 60. Tab. Digoxin, 1 b.d.; 80. Tab. Senokot: 100.

EDUCATION IN PHARMACY

Information for students and intending entrants to the profession

Each pharmacy school in Great Britain now has almost complete autonomy in what and how it teaches its students. This has given an opportunity for new approaches to old problems, some of which are explained in the following articles.

TRAINING THE PHARMACIST OF THE 1970's

THE ACADEMIC CHALLENGE ACCEPTED
AT THE UNIVERSITY OF ASTON IN BIRMINGHAM

1. General Principles and Pharmaceutical Sciences

PROFESSOR N. J. HARPER, M.Sc., Ph.D., A.R.I.C., M.P.S. (Head of the department of pharmacy)

IN its traditional form, the practice of pharmacy demanded a thorough knowledge of the chemical and biological properties of the many substances of vegetable, animal, organic and inorganic origin used in the treatment of disease. Those materials were largely replaced, first by the isolated active principles of the crude drugs, and in more recent times by organic substances obtained by solely synthetic chemical processes. The physician at the beginning of the twentieth century had a great variety of medicines at his disposal, but few could substantially alter the course or alleviate the symptoms of major disease.

Revolution in Therapeutics

The 1930's saw the introduction of the sulphonamides and the beginnings of a veritable therapeutic revolution, from which have emerged hundreds of new, effective and potent drugs that have materially altered the practice of medicine and indeed the lives of us all. Within the past thirty years we have seen the production of drugs that may

be used in the systemic treatment of bacterial infection. The diabetic can be treated with insulin and the synthetic hypoglycaemics. Tuberculosis and parasitic diseases can be cured. Psychoses, mental depression and anxiety can be relieved. While it is difficult to over-emphasise the importance of those developments in terms of the well-being of mankind, we must not overlook the fact that we have been less successful in curing the degenerative, neoplastic or genetic diseases. Much remains to be done.

Growing Knowledge

The pharmaceutical sciences have been involved in, and contributed to, this therapeutic revolution. Our knowledge of the chemistry of drugs has greatly increased, as has our knowledge of their biological effects. In pharmacology, for example, a great deal of effort is now directed to the action of drugs at a molecular and cellular level, something that was in its infancy thirty years ago. The large array of new drugs has forced us to develop new forms of presentation to

achieve accurate dosage control and predictable therapeutic effect. Consequently a whole new area of pharmaceutical formulation has developed, superseding the art of extemporaneous dispensing.

Pharmacy is multi-disciplined, drawing as it does on the study of chemical and biological sciences, so that advances in knowledge of these subjects and changes in the approach to their teaching must be reflected in pharmacy. This has indeed happened. The current approach to the teaching of the pharmaceutical sciences has obviously been substantially affected by the educational policies of the Pharmaceutical Society of Great Britain. The decisions to extend the length of the qualifying course, and to discontinue the Society's traditional rôle as an examining body, have had far-reaching effects. They came at a time when new universities were being created and regional colleges were mounting C.N.A.A.-type degrees — changes that were to result in an increased freedom for the universities and colleges. Changes long envisaged but impossible in the presence of a nationally applied syllabus became possible, but the Society rightly continues to play a vital rôle, in that it must recognise the new courses for statutory registration purposes.

What is a Pharmacist?

The flood-gate of change having been opened, we are now in the stage of change and transition. New-found academic freedom has in fact highlighted the problems we face. What is a pharmacist? We know that the qualified pharmacist may find his vocation in general practice, hospital pharmacy, industrial production or research. How do we cater for those diversities, or indeed, can we cater for them? Should we have specialist and/or general degrees? How do we reconcile the fact that some parts of the training are not, in their very nature, the stuff of which university degrees are made? Do we need further degree courses such as the M.Sc., which would allow elements of specialisation? Whatever decisions the academics make, we appreciate that we do have a major responsibility to ensure that our students on registration with the Society are worthy and capable of accepting their responsibilities.

Like most other schools of pharmacy, the University of Aston is going through this period of transition. Much thought has gone into the design of the optimal course or courses, but the great thing is that we have now the flexibility to change and modify in the hope that we may achieve what is perfect. The standing of the pharmaceutical sciences is closely associated with the quality and, let us face it, volume of research being carried out in the schools of pharmacy. This has greatly increased and cannot fail to enhance the standing of our profession. The importance of research is not recognised by many, but let us be in no doubt that the standing of our subject in a university environment will depend not only on the quality of our undergraduate courses but also on the research contributions that we make to our science.

Medicinal and Pharmaceutical Chemistry

The choice of subtitle obviously indicates a personal preference and the belief that drugs are the very essence of pharmacy; also the conviction that the pharmaceutical sciences should be directed to a study of the chemistry, the biological activity and the formulation or presentation of drugs. The pharmacist should be an expert on drugs, a rôle which I believe can be uniquely his. Drugs play such a major part in our civilisation that it is surely desirable to have someone expert in such matters.

In the past, pharmaceutical chemistry embraced organic, physical, inorganic, analytical and general chemistry. Many have long recognised the formidable nature of the former courses in pharmacy, entailing as they did long hours of practical work and lectures. That seemed inevitable when the nature of the course was considered, but the inevitability is likely to be questioned by university Faculties and

Senates when they make comparisons with other sciences. The course has in general been streamlined and shortened. A by-product might be that we give the student some time to think. In these rearrangements something has got to be sacrificed, but in making these decisions ingrained prejudices arise.

In the University of Aston we have made substantial cuts in the inorganic part of the syllabus, and have redesigned the analytical exercises in order to avoid much of the repetition that was once a feature of the course. The analytical chemistry and the achievement of dexterity in this is still considered important, since quantitative science is generally good science. Analytical control and research still remains a vocation for which the student of pharmacy has a unique introduction.

The biggest single problem in reorganising the course has been resolution of the question "What approach do you use in teaching organic chemistry?" Many of us were weaned on the traditional approach — certainly an organised one beginning with aliphatic hydrocarbons, proceeding through aldehydes and ketones to the benzene ring, and finally to the heterocyclics. The methods of preparation, the properties and the pharmaceutical examples were learnt and possibly remembered. Recent advances in organic chemistry have resulted in a swing to the mechanistic approach, where it all — or nearly all — becomes part of a predictable theoretical exercise and involves the shifting of electrons. The danger lies in the fact that the student might end up being familiar with electrophilic and related additions to unsaturated carbon, but really unfamiliar with the nature of currently used drugs. As in most schools, a compromise has been adopted in an attempt to combine the best of the traditional with the best of the mechanistic approach.

New Emphasis

In pursuance of the idea of the importance of actual drugs, much greater emphasis is being paid to medicinal chemistry, which involves the study of such things as the relation between biological activity and chemical structure, the metabolism and distribution of drugs, the action of drugs at receptor sites, the effect of drugs on enzymes, etc. Here the students experience the bringing together of the sciences they have studied, and this usually proves to be an area of great interest. We are attempting to eliminate, or partially correct, the situation in which a student could be well versed in the Beckmann rearrangement but know little of the chemistry of some drugs of major therapeutic importance.

In physical chemistry emphasis continues to be placed on physical instrumentation and its application in analysis and in structural problems. Such techniques, for example ultra-violet and infra-red spectra, are introduced at an earlier stage than in the past. In line with modern developments the student will have the opportunity of seeing the importance of nuclear magnetic resonance spectra. Those changes have resulted in a course that is not yet rigidly settled; indeed it might be a good thing to avoid any such rigidity.

Cuts made in the hours spent on the course have been compensated to some extent by a close look at, and an attempt to eliminate, the artificial barriers created by the administrative subdivision of the department. The importance of practical laboratory work is still a principle to which we adhere, but such work must avoid useless repetition and be designed in such a way as to stimulate the student. The number of crude drugs of therapeutic importance is decreasing, and much of traditional pharmacognosy will disappear, the remaining important features being combined with chemistry and pharmaceutics. This might permit an extension of our activities into the fields of compounds used in the treatment of animal and plant diseases.

Change is the order of the day. I hope it is not change for the sake of change but an attempt to instruct and, above all, to educate our students.

2. Pharmaceutics

R. A. CRAWFORD, F.P.S., A.R.I.C., D.B.A.

PHARMACEUTICS, an essential part of the practice of pharmacy, comprises predominantly the preparation of drugs and their handling from manufacture to use by the patient. The subject is taught relevant to the vocation of the pharmacist, perhaps more directly than the other sciences of the pharmacy degree syllabus. Increasingly, however, basic principles rather than manual dexterity are the basis of the teaching. The undergraduate study of pharmaceutics equips the student for entry into the main spheres of employment for the pharmacist — general practice, hospital service, the pharmaceutical industry — and, for a few, serves as a preparation for further study by research or course work for a higher degree. Pharmaceutics being a diverse subject, many schools of pharmacy subdivide it into general pharmaceutics and microbiology.

A Profound Change

Within the past thirty years a therapeutic revolution has taken place that has seen the introduction of modern synthetic drugs in place of many of the older medicaments of biological origin. The vegetable powders, the galenical preparations such as the infusions, the extracts and the tinctures are receding into the past, their place being taken by synthetic chemicals. It is therefore not surprising that there has been a profound change in the teaching of pharmaceutics, particularly during the past ten years or so, since the very nature of the materials of pharmacy has changed. The presentation of an appropriate dose form of a drug is quickly moving from an art or skill to a science: the science of formulation. At one extreme — a simple solution, for example — the formulation may appear deceptively simple. At the other it may be extremely complex, as with the sustained-release type of preparation. But whether simple or complex, one would hope that it is based on scientific principles.

Modern drugs must be used with precision, and the science of formulation has evolved in achieving that precision. The pharmacist has always been a formulator, but today's student is concerned with more than formulation for extemporaneous dispensing. He must consider also the more stringent requirements of the formulated product when made on the industrial scale, where there is an ever-increasing tendency for the medicine to be packed in the final container ready for issue to the patient. The aim of the formulator is to provide an accurate dose of the medicament in an acceptable and effective form, free from any deterioration to the end of the envisaged life of the preparation. The pharmacist is intimately concerned with, and must have a knowledge of, the chemistry and physical properties of the materials being handled. For example particle size may be of considerable importance in obtaining maximum therapeutic effect. Excipients such as powdered liquorice and syrup of glucose in pills have long been used in pharmacy, but now there is great use of another generation of ancillary ingredients to confer the required properties to the completed preparation. An illustration of the point is the increased use of flavouring agents, particularly in paediatric medicines.

Considerable emphasis is laid on this so-called "physical pharmacy" in which the physicochemical principles of materials and systems of pharmaceutical interest are studied. Rheology, the study of flow and deformation of matter,

has wide applications — from the regular flow of a cream into tubes on filling to the passage of a viscous injection through a narrow needle during administration. Systems of pharmaceutical interest also vary widely, from the flow of tablet granules to the spray pattern of an aerosol. Physical and chemical characters are of considerable importance in those systems and stability is necessary in both. An instance of physical instability is the change in size of crystals in suspension on storage.

Associated with the needs of stability is the requirement that the preparation shall not become toxic as a result of microbial contamination. The initial use of penicillin found the pharmacist at that time unprepared for handling such material by the necessary aseptic technique. The present-day student is, by contrast, well prepared. In the training in basic microbiology the student studies principally bacteria, with an introduction to the other three living forms: fungi, protozoa and viruses. The study of bacteria includes their morphology, structure, function, growth, cultivation and identification. The student proceeds to learn the ways in which those forms may be prevented from contaminating pharmaceutical preparations and where that is not practicable, how they may be killed or removed. The prevention of bacterial contamination embraces considerations such as the materials used, the operator and the environment in which he works. By practical tuition the student becomes familiar with the necessary techniques to achieve that end. Freedom from living bacteria is not sufficient if harmful toxins or pyrogens have already been released. The importance of sterility is obvious in preparations injected into the body and there were recently serious results from the use of contaminated ophthalmic preparations. But the need for absence of toxicity due to microbial action extends to other forms of presentation. For example, creams present a considerable challenge to the ingenuity of the formulator. Here the partitioning of the preservative between the two phases may result in an insufficient quantity in the aqueous phase.

A Case for Specialisation

I have written so far of the formulation of pharmaceuticals without reference to that important partner for consideration — the container. Here the training of the pharmacist makes him eminently suited to specialisation. It is necessary to consider the container from the start of formulation experiments, with their ensuing stability studies, and recent years have seen the introduction of a great diversity of packaging materials. Plastics are widely used, in packs of varying size and application, and they present problems (such as diffusion of moisture) not encountered with the traditional glass. Glass itself is not without problems as it may release alkalinity or shed solid particles on storage.

It is essential for the student to integrate the knowledge which, for administrative reasons, is imparted from the various sections of the department. In the consideration of formulation the action of the drug and how it is brought about, its therapeutic use, absorption and transport within the body, utilisation and excretion are all relevant topics. Together they are referred to by some as "biopharmaceutics." Frequent attempts are now made to alter the onset and duration of action, a good example being provided by insulin in the form of zinc suspensions, in which duration

of action is linked with the particle size. Some important drugs of biological origin have yet to be replaced by the synthetic chemical and a study is therefore made of the more important botanical drugs, their active principles, isolation and identification being of special importance. Fibres of natural and synthetic origin are used in surgical dressings, sutures and ligatures. A related study is pest control with reference to herbicides, insecticides and fungicides. Fermentation processes yielding chemicals and antibiotics are studied. The student is instructed in the antibacterial activities and mode of action of the antibiotics, the development of drug resistance and the relevant bacterial chemistry. Immunological products also receive considerable attention.

Many older pharmacists may be surprised to see how the schools of pharmacy have assumed responsibility for equipping the student for entry into general and hospital practice by demonstrating that dispensing is much more than the supply of a drug suitably labelled. The school at Aston makes it a requirement that the prescription shall be correctly interpreted and forensic and National Health Service requirements complied with. The student establishes whether the dosage is satisfactory and ascertains the antidote in case of over-dosage; he records the composition, action and use of the preparation, names alternative or equivalent preparations with similar uses, other presentations and forms of the drug — all in addition to scrutinising the prescription for chemical or therapeutic incompatibilities. The student is encouraged to use as wide a range of reference sources as possible to supplement his already considerable expertise in this area. The rôle of the pharmacist as disseminator of such information to medical colleagues, and the need to maintain resources to do so, are stressed.

For practice in the hospital service the specialised knowledge that the pharmacist has in sterilisation procedures has gained for him involvement in central sterile services departments. His study embraces not only the use of steam as a sterilising agent but also of other methods such as dry heat, ionising radiations and filtration. In addition to those physical methods, there is the use of chemical sterilising agents, for example ethylene oxide. Detailed study of disinfection and disinfectants permits the pharmacist to evaluate that important class of materials used in such large quantities in the hospital service.

Quality control is necessary at all stages, from the approval of the raw materials and packaging components, through the stages of production to the final preparation when freshly prepared and when finally supplied. The techniques of quality control of drugs are largely within the province of the analytical chemist, but some are dealt with in the pharmaceuticals section, as for example the disinfection requirements for tablets and the bacteriological examination of water. It is not enough for the pharmacist to be able to apply his basic microbiology in developing an aseptic technique or a suitable sterilisation process; he must be able to demonstrate that the process is efficient. He is therefore thoroughly trained in understanding and practising the techniques of sterility testing.

Thus it is clear that pharmaceuticals has changed considerably in its scope and emphasis in recent years. Much less practical work is done by the student, resulting in less expertise in traditional preparations, but a scientific approach to the practical problem is aimed at that is in keeping with the outlook of a graduate of an applied science.

3. Pharmacology

By P. S. J. SPENCER, B.Pharm., Ph.D., M.P.S.

OF the four pharmaceutical sciences that traditionally form the basis for the degree in pharmacy, none has increased in size and importance more than pharmacology during the past twenty years. Its expansion reflects not only greater knowledge of the biological actions of drugs, and the discovery of large numbers of very potent drugs, but also the growing number of graduates entering a career in pharmacology through a qualification in pharmacy. Furthermore, there is an ever-increasing need for pharmacists in all branches of the profession to have a greater understanding of the biological actions of drugs. Through better understanding should come increased safety. It is of fundamental importance, therefore, that the changes occurring in the uses to which the pharmacy qualification is put, and the increasing importance of a sound knowledge of pharmacology to the pharmacy graduate, should be fully recognised. Upon those facts must be based what is taught.

Importance of Physiology

Traditionally, pharmacology teaching is built upon a sound knowledge of mammalian physiology. Until recently all pharmacy students entered college with an "A" level in biology or an equivalent biological subject, but schools of pharmacy are now admitting students with a mathematical instead of a biological subject, and it is therefore even more important that adequate physiology should be taught as a preliminary to pharmacology. There is an old argument about the transition from physiology to pharmacology in the undergraduate's course. Some advocate that the two should be integrated; others argue that, so far as possible, all of the necessary physiology should be taught

before drugs are introduced. In practice, few teachers have followed exclusively either method but, with the increasing numbers of non-biology students, it will be necessary for schools to devote their first year to purely physiological studies.

"Objective" Tests

At a recent conference in London many teachers of pharmaceutical subjects expressed concern at the lack of objective assessment of a student's abilities, and it seems likely that many schools will remedy the task by introducing objective tests and examinations, similar to those in use in America, particularly in a descriptive science like pharmacology. (It would be useful if it could first be clearly established what is meant by "objective tests and examinations," and whether they have advantages over traditional examination systems.) It is my personal belief, however, that we should first make sure that what is taught is both adequate and relevant, and that important topics are not omitted. This is a difficult aim to achieve because of the variety of careers a student may choose to follow. It is no longer possible to provide, within the three years leading to a degree, a course in pharmacology that would be free from criticism from some branch of pharmacy. Some degree of specialisation is becoming inevitable, not only to the student who wants to go into research, but also to the future hospital and retail pharmacist. Whether suitable specialisation can be fitted into the present three-year course, or alternatively should be the subject of a special fourth year, is open to argument. But we should be clear in our minds: such specialisation would benefit

the hospital and retail pharmacist every bit as much as the one who plans a career in the pharmaceutical industry or some other form of research. We should be equally clear of the dangers inherent in such specialisation. Pharmacology has become a science in its own right and, in pursuing some special aspect, we must ensure that the fundamentals of the science are both taught and understood.

All current pharmacy degree courses in England and Wales are of three years' duration. Physiology/pharmacology is studied throughout the course, although the proportion of the student's time devoted to the subject varies from school to school, and from year to year within the same school. At the University of Aston in Birmingham, equal time is devoted to medicinal and pharmaceutical chemistry, pharmaceuticals and physiology/pharmacology. Final-year students are examined in all three subjects and each subject counts equally in the final degree classification. Into that structure an attempt has been made to provide a course in physiology/pharmacology which would fit a student for any branch of pharmacy. Because such an aim is becoming increasingly difficult to realise, provision is being made for some differentiation between students in their final year: some would specialise in one subject of their choice, say pharmacology; whilst others would pursue all subjects to an equal extent, and in a different way to the student being taught in great depth in one subject.

A Research Career

What would the graduate gain from studying only a single subject in his final year? First, he should anticipate a research career in his chosen subject. Specialisation in pharmacology will permit an orientation towards basic cellular mechanisms of drug action and an opportunity to examine the properties of drugs in minute detail, with the object of producing a graduate capable of initiating original research in the discovery of new drugs. In contrast, the student who continues to study all three major subjects will have his syllabuses modelled specifically to careers in hospital and retail pharmacy. Pharmacology will be biased towards therapeutics; instead of a preoccupation with the actions of drugs at cellular level, he will be more concerned with their usefulness, their advantages and disadvantages, and the possibilities of a therapeutic incompatibility when prescribed in conjunction with other drugs. Today the pharmacist is required to dispense the exact drug prescribed; in future, it should be possible for the physician to prescribe the *type* of drug and the pharmacist to decide the best drug available for the ailment, taking into account such factors as speed of onset, duration of action, suitable dosage, and so on. Little is known at the moment about the reactions of different sections of the community to drugs. There are indications that quite marked variations occur in the effects of drugs on different races, and people of different ages. In the future, a knowledge of those variables will be a factor of considerable importance in avoiding unfortunate side effects of drugs. It could be the pharmacist's responsibility.

The overwhelming majority of the Society's members are retail pharmacists. During the past thirty years, their rôle has changed considerably. Some of their special manipulative skills are no longer required but instead their position has become an executive one in which they must ensure that the patient receives the correct form and dosage of a wide range of potent, potentially dangerous, medicines. Increasingly they are asked to advise on the suitability or advantages of one drug over many others. The nature of the drugs themselves has also changed. A complete armamentarium of pharmacopoeial vegetable drugs has disappeared and only a few, such as digitalis and belladonna, with identified active principles, remain in use. They have been replaced by an even greater number of chemically novel potent drugs which in many cases completely abolish the symptoms of disease. Thus it is essential for the phar-

macist to have a thorough understanding of the biological actions of the drugs in his possession, and for him to recognise the dangers inherent in their use and misuse.

The problem of the long qualified pharmacist in this respect is important, because many will have only rudimentary knowledge of the properties of biological tissues and the potentially dangerous effects of drug intervention. Refresher courses are numerous, but how effective are they in restoring an adequate level of knowledge? In contrast, the newer graduate should be well versed in basic physiology and pharmacology and be in a position to keep himself voluntarily well-informed of new products for many years.

Recently there has been considerable criticism of the distribution of medicines in hospitals, and it seems likely that pharmacists will have to exercise greater control over drugs at ward level. There has been also considerable discussion on the possible advisory rôle of the pharmacist in hospital, particularly in pharmacological matters. The extent of his knowledge, coupled with reasonable experience, is probably more than adequate to fill such a rôle, but what are the chances of his doing so effectively? Should the impetus come from the schools of pharmacy? One practical step in that direction would be greater emphasis on the decisions to be made when drugs are prescribed: what disease?, which drug?, when?, for how long?, and at what dose level?

Finally, some comments about the pharmacy graduate who becomes a pharmacologist. Although such people form only a small fraction of the total membership of the Pharmaceutical Society, they form a substantial proportion of Britain's pharmacologists. In a recent questionnaire into the organisation of pharmacology in this country, it was revealed that, in universities and industry, 33 per cent. of all pharmacology appointments between 1958 and 1963 were to persons holding a pharmacy qualification, against only 17 per cent. to persons with medical qualifications and 19 per cent. with a degree purely in physiology or pharmacology. In industry, the pharmacologist's duties are often twofold: to supervise and assess the routine screening of new chemical compounds for biological activity, and personally to carry out the follow-up research into the "leads"—the potential new drugs.

During the past twenty years pharmacology has absorbed a major proportion of the expansion in pharmacy teaching and now is as important as any other subject in the pharmacy course. Pharmacology is the study of the biological actions of drugs. Since pharmacy is the study of drugs in all their aspects, it follows that a sound fundamental knowledge of pharmacology is of paramount importance to the modern pharmacist.



THEORY IN PRACTICE: Pharmaceutical students viewing a tablet-counting machine during a recent visit to the works of Leo Laboratories, Ltd., Cashel Road, Dublin.

THE PLACE OF PRACTICAL TRAINING IN PHARMACEUTICAL EDUCATION

A New Approach and the Opportunities it Offers

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DURING his college course the pharmaceutical student acquires a sound knowledge of the basic principles of the pharmaceutical sciences. But, before he can be considered a fit and proper person to be registered as a member of the Pharmaceutical Society and to assume the responsibilities of a pharmacist, he must learn how to apply those principles to the day to day running of a pharmacy or pharmaceutical department. He must acquire a sense of responsibility, develop correct standards of professional conduct and learn the correct approach to his colleagues, members of allied professions and the general public.

At college all pharmacy students learn of the responsibilities they will have to face in the practice of their profession, but the sense of responsibility itself, and other attitudes of mind, can only be acquired by experience. The main purpose of practical training is to develop this sense of responsibility. The pharmacist who, by his advice and example, inculcates high standards of professional conduct into his student is not only assisting that student but is also rendering a great service to his profession and to the public it serves.

Advantages of Planning

The period of practical training is a most important part of any student's education. While it can be argued that the student will acquire the necessary knowledge and standards of conduct simply by working in a pharmacy it cannot be denied that greater value will accrue if the work he does is planned in such a way that he obtains the widest possible experience and if the pharmacist under whom he is working is prepared to discuss with him day to day problems. Thus, sufficient control should be exerted over the conditions of training to ensure that the student gains as much benefit as possible from the training and, if the control is to be more than superficial, the student should be visited more than once during training. Such visits could be more easily undertaken by schools of pharmacy than by staff of the Pharmaceutical Society. However, upon graduating, a student passes from the jurisdiction of the school and it is, therefore, impossible for schools of pharmacy to control postgraduate training. If the training were integrated into the college course then it could be controlled to some extent by the school of pharmacy.

At the turn of the century, forward-looking educationalists in Glasgow and in Sunderland were examining the problem of integrating the practical training of engineering students with their academic course. In both places the same solution was tried and courses of the type now known as "sandwich courses" were introduced. In such courses the student spent half of each year in college and the remainder training in industry. So successful were the experiments

that when, ten years ago, courses for Diplomas in Technology were introduced they followed the "sandwich" pattern. There are a number of variants of this type of course. The most important is the so-called "thick sandwich course" which contains a single period of industrial training, usually twelve months in duration and between the second and fourth year of a four year course. "Thick" and "thin" sandwich courses are compared in the following table:—

	"Thick" sandwich course	"Thin" sandwich course
First year	College	College and industry
Second year	College	College and industry
Third year	Industry	College and industry
Fourth year	College	College and industry

A number of advantages would accrue from the integration of pharmaceutical practical training. Co-operation between the schools and pharmacists would result in improved training, and the help and advice the latter would receive from the schools might encourage more pharmacists in private general practice to undertake this important service to their profession. The pharmacist would be ensured of a steady flow of students, thus preventing the loss of many excellent postgraduate studentships which become filled by pharmacy technicians. The student would still be an undergraduate and so subject to discipline — the award of his degree would depend on the satisfactory completion of his practical training.

First-hand Experience

The student would not only benefit from better training but his third and final year at college would have more significance for him because he would have learnt the responsibility of dispensing medicines that were to be taken by patients. He would also have encountered, at first hand, many of the drugs he has to study. The schools would also gain from their contact with practising pharmacists. They would be helped with their problem of keeping abreast of modern trends in prescribing and would have their attention drawn to pharmaceutical problems needing investigation.

For a number of years what might be called a "non-integrated thick sandwich course" was possible. Until recently the Society allowed degree students who were referred in one subject in the Part 1 examination to undergo their practical training before taking the final year of their college course. Such an arrangement must not be confused with an "integrated thick sandwich course" because the course was not designed to allow for such a procedure and the school had no control over the training. However, it is interesting to note that the writer cannot recall a single

complaint from an employer about a student following such a course, although there have been several about post-graduate students. No doubt the fact that these students had already taken their final dispensing examination enabled them to benefit more from their practical training.

If the period of practical training is to fulfil its primary function of inculcating a sense of responsibility rather than simply giving an acquaintance with pharmaceutical practice it is essential (a) that it should take place after the student has taken his final examination in dispensing and in forensic pharmacy and has received some tuition in pharmacology and (b) that it should be one complete year, all served in one place. A "thin sandwich course" in which the student serves six months in each of the three major branches of pharmaceutical practice is attractive but it would fail to give the student the opportunity of assuming responsibility. It would be unsatisfactory from the point of view of the pharmacist because almost six months' experience is required before a student becomes sufficiently useful to an establishment to repay the time, trouble and cost involved in training him.

In outline, the following principles would be involved in an integrated practical training. Before a trainee was appointed a training programme would be arranged by consultation between the student's tutor and the pharmacist concerned. The tutor would satisfy himself that the pharmacy or pharmaceutical department offered suitable oppor-

tunities for training a student. During the period of training the pharmacist would maintain contact with the tutor who would visit the student at least twice. The student would be required to keep a journal in which to record any unusual or interesting problems, as well as a report on any project he may be required to carry out during his practical experience. At the end of the year the pharmacist would report to the tutor on the progress his student had made and this report would be available to the examiners when they were assessing his course work.

Integrated practical training would present many problems, not the least of which would be finding sufficient places for students to train. That could be overcome, for there must be more than enough pharmacists willing to render this important service to their profession. Difficulties in connection with the supervision of the student by the college during his industrial period are also considerable, but not insurmountable. The engineering departments at Sunderland Technical College have had much experience in running "thin sandwich courses" and they have found no insuperable problem in supervising industrial training even when it has been undertaken in Scandinavia or America.

The value of integrated practical training in pharmacy could only be established by experiment, and such an experiment would be well worth trying for students following an ordinary or general pharmacy degree course.

BOOKS FOR PHARMACISTS and Pharmaceutical Students

Problems for General Chemistry and Qualitative Analysis

C. J. NYMAN and G. B. KING, *John Wiley & Sons, Ltd.*, Glen House, Stag Place, London, S.W.1. 8½ x 5½ in. 23s.

DESCRIBES methods of solution for the various types of numerical problem that occur in elementary chemistry courses and provides a set of problems of each type for solution (answers provided). An appendix provides a short refresher course in mathematics for students who need it. Not, the authors state, a textbook but for use in close conjunction with one.

Biochemistry Laboratory Techniques

S. CHAYKIN, *John Wiley & Sons, Ltd.*, Glen House, Stag Place, London, S.W.1. 9¼ x 6¼ in. Pp. vii + 169 45s.

OF American origin, this is a laboratory manual designed to provide a basic working knowledge of biochemical research techniques. It gives detailed working instructions for a wide variety of experiments illustrative of each technique and sets study questions. Theoretical considerations are kept to a minimum, however, the student being expected to search out his own answers by reference to biochemical literature (many "leads" are offered).

An Introduction to Pharmaceutical Formulation

A. G. FISHBURN, F.R.I.C., F.P.S., DIP.PHARM.ANAL. *Pergamon Press, Ltd.*, Headington Hill Hall, Oxford. 7¼ x 5 in. Pp. vii + 192. 25s.

INTENDED primarily for pharmacy students and describes the various forms in which drugs may be supplied. The earlier chapters deal with materials added to drugs to provide the formulated product — diluents, solvents, liquid vehicles, thickeners, binders, fats, waxes, surface-active agents, colours, flavours and preservatives. Solid, liquid and paste formulations are then considered type by type. The final chapters are concerned with control of drug release, stability, containers and process establishment.

Drug Identification

C. A. JOHNSON, B.SC., B.PHARM., F.P.S., F.R.I.C. (editor) and A. D. THORNTON-JONES, M.P.S. (assistant) *Pharmaceutical Press*, 17 Bloomsbury Square, London, W.C.1. 8½ x 5½ in. Pp. ix + 133. 35s. (U.K. postage 10d.)

OFFERS as an aid to rapid drug identification a scheme of analysis which relies principally on the determination

of the elements present in the compound, followed, where appropriate, by a determination of certain physical and chemical characteristics (such as melting or boiling point, solubility, light absorption, optical rotation). Based on the schemes formerly published in the Extra Pharmacopoeia, it has been extended to cover all relevant substances in the British Pharmacopoeia (and its 1964 supplement), the British Pharmaceutical Codex, and the United States Pharmacopoeia and National Formulary.

Pharmaceutical Chemistry Vol. I

L. G. CHATTEN (editor), *Edward Arnold (Publishers), Ltd.*, 41 Maddox Street, London, W.1. 9¼ x 6¼ in. Pp. v + 504. 115s.

DESPITE the title, is restricted to analytical chemistry as applied to pharmaceutical substances. Volume one deals with "classical" methods and a number of miscellaneous techniques: volume 2 is to cover instrumental methods. The theory and practice of gravimetric analysis, acid-base titrimetry, precipitation and complex formation, acidimetry and alkalimetry, non-aqueous titrimetry, complexometric analysis, alkaloidal assay, ion exchange chromatography and analysis of fixed and volatile oils, fats and waxes are among the topics discussed in the first volume by a team of thirteen authors. A selection of problems and references is appended to most chapters.

Sterilisation and Disinfection

T. D. WHITTET, B.SC., PH.D., F.P.S., F.R.I.C., D.B.A.; W. B. HUGO, B.PHARM., PH.D., F.P.S. and G. R. WILKINSON, F.P.S. *William Heinemann Medical Books, Ltd.*, 23 Bedford Square, London, W.C.1. 8½ x 5½ in. Pp. 277. 30s.

THIRD in the publishers' Pharmaceutical Monographs series the book assumes a knowledge of microbiology equivalent to that taught in the earlier *Introduction to Microbiology*. Introductory chapter discusses the development of parenteral therapy and of sterilisation methods and surveys the types of preparation required sterile. Chapter on methods covers dry heat and moist sterilisation, use of gases and ionising radiations and aseptic techniques. Practical details of preparation follow with chapters on ophthalmic preparations and dressings and syringes A 172-p. appendix deals with the organisation of a sterile materials laboratory, discussing sterility tests, autoclave design and disinfection.

Microbiological Methods

C. H. COLLINS, M.B.IOL., F.I.M.L.T. *Butterworth & Co. (Publishers), Ltd.*, 88 Kingsway, London, W.C.2.
8½ x 5½ in. Pp. xii + 404. Second edition. 62s.

MAIN emphasis is on bacteriology, with a certain amount of mycology. Introduction deals with general characteristics, classification and cultivation with a chapter on serology. Second section is concerned with technique. In this edition a chapter on complement fixation has been contributed by Dr. C. E. D. Taylor of the Central Public Health Laboratory, Colindale. Third section discusses the main groups of micro-organisms and the final section on applied microbiology includes chapters on antibiotics and other antibacterials, disinfectant testing, microbiological assay, safety in the laboratory and others mainly of interest in the fields of food and public health. Recent advances in techniques, identification methods and nomenclature are incorporated.

Polysaccharides Peptides and Proteins

R. T. COUTTS, B.SC., PH.D., A.R.C.S.T., M.P.S. and G. A. SMAIL, B.SC., A.R.C.S.T., M.P.S. *William Heinemann Medical Books, Ltd.*, 23 Bedford Square, London, W.C.1. 8½ x 5½ in. 30s.

DEALS with the basic chemical and physical properties of the various macromolecules considered with examples of homogeneous or simple heterogeneous materials from each class that have medicinal and pharmaceutical uses. Properties of the materials discussed are related, where possible to their pharmaceutical use. Dr. Coutts deals with polysaccharides. After an introductory chapter on mono- and disaccharides follows the main subject. Subsequent chapters describe plant gums and mucilages, mucopolysaccharides and polysaccharides of Gram-negative bacteria. Mr. Smail commences with amino acids, goes on to polypeptides and proteins and follows with a chapter on hormones of that composition. Final chapter is on polypeptide antibiotics.

Outlines of Biochemistry

E. E. CONN and P. K. STUMPF. *John Wiley & Sons, Ltd.*, Glen House, Stag Place, London, S.W.1. 9 x 6 in. Pp. 468. Second edition. 75s.

INTENDED as an introductory text for advanced undergraduates and first year graduates in American universities, the book opens with a revision chapter on pH and buffers and continues with the chemistry of biological compounds. The second section deals with biochemical energetics, enzyme systems and the metabolism of the major cell constituents. A final section considers the inter-relations among the carbon, nitrogen and energy cycles with respect to the previously discussed material. The mathematics of buffers and pH are dealt with in an appendix. Other appendices review modern concepts in organic chemistry and describe methods used in biochemistry. The new edition has been revised to include findings that have been published in the interval since the first appeared.

International Encyclopedia of Pharmacology and Therapeutics: Clinical Pharmacology Volumes I and II

L. LASAGNA (section editor). *Pergamon Press, Ltd.*, Headington Hill Hall, Oxford. 9¼ x 6 in. Volume I Pp. xiii + 373, 80s. Volume II Pp. xxx + 294. 63s.

Two volumes on clinical pharmacology in a series on pharmacology and therapeutics sponsored by the International Union of Pharmacology. Volume I deals with the central nervous system (including anaesthetics, hypnotics, analgesics, psychotropic drugs, antiemetics, antitussives, anorexigenics, drugs for the treatment of epilepsy and Parkinsonism, and antipyretics) and the endocrine system (antithyroid drugs and those affecting diabetes and hypoglycaemia). Volume II is concerned with cardiovascular, renal and blood pharmacology, drug treatment of arthritis, chemotherapy of bacterial infections and malignant diseases, treatment of allergic states, and adverse reactions to drugs. Emphasis is on methods of evaluation and design of clinical trials.

Basic Organic Chemistry

J. M. TEDDER and A. NECHVATAL, *John Wiley & Sons, Ltd.*, Glen House, Stag Place, London, S.W.1. 8 x 5 in. Pp. 238. 21s.

SUBTITLED "A Mechanistic Approach" the book bases its

exposition on the Lewis theory of valency. The book is intended for Advanced Level G.C.E. students but does not claim to be exhaustive. After dealing with the carbon-hydrogen and carbon-halogen bonds the concept of functional groups is introduced, followed by elimination reactions and addition reactions. Having worked through the basic types of reaction carbon derivatives of inorganic oxyacids, carbon-carbon triple bonds, organometallic compounds, conjugated dienes and reactions of the aromatic nucleus are described. Optical isomerism, naturally occurring organic compounds and compounds derived from coal and petroleum are discussed, with a final chapter on synthesis. Problems are given at the end of each chapter.

American Pharmacy

J. B. SPROWLS, PH.D. and H. M. BEAL, PH.D. (editors). *Pitman Medical Publishing Co., Ltd.*, 46 Charlotte Street, London, W.1. 10 x 7 in. Pp. xv + 426. Sixth edition. 105s.

THIS new edition sees the first major change in presentation since the book's inception, and it is now essentially a treatise on dosage forms — their history, the methods by which they are prepared and their anticipated uses. Although primarily a textbook for the American pharmacy student, it should also serve as a valuable reference work for those already qualified. Basic scientific knowledge, which was covered extensively in the earlier editions, is now omitted except for information on pharmaceutical measurement. The sixteen chapters break the subject down into compartments such as aqueous solutions containing aromatic principles, dosage forms prepared by extraction, colloidal dispersions, etc. But in addition to the traditional forms of presentation, the more recent forms, such as gas dispersions (aerosols and sprays) and radioactive dosage forms also receive attention. The book contains 171 illustrations.

Management Training in Pharmacy

THE INSTITUTE AND ITS SERVICES

A COMMON cause of complaint among pharmacy students intending to enter general practice has been the lack of adequate business training in their courses. It seems unlikely that many first degree courses will be able to accommodate such tuition in the immediate future and most students wishing to become experts in that aspect of their profession must therefore consider some form of post-graduate study.

One organisation outside the academic sphere that is planning to provide for that need is the Institute of Pharmacy Management, formed in 1964 to promote research and up to date teaching in pharmacy administration and to provide information on management problems. Associate membership of the Institute may be held by any pharmacist. Full membership is attained either by passing the membership examination or by obtaining a degree or diploma, acceptable to the council, in any subject related to accountancy, economics, law, management, marketing or similar disciplines. Associates of at least three years' standing may apply for membership after presenting a thesis (having submitted a title and outline of the proposed work to the education committee) or submitting evidence of at least twenty years' post-registration pharmaceutical experience.

A private study course is supplied to students of the Institute (registration fee £5 5s.) to enable them to prepare for the membership examination. Students may present themselves for examination one year after registration. Alternatively, prospective members (and other pharmacists who are interested) may attend a course of sixteen lectures held annually in London in October. The course lasts four days and is followed by a test for registered students who, if they complete the course satisfactorily, may apply for membership without waiting to complete the twelve-month registration period. Fee for the course is £26 5s. Further particulars may be obtained from the Institute at 27 Park View, Hatch End, Middlesex.



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New Pharmaceutical Ideas on Education

DEVELOPMENT in pharmaceutical education has proceeded at such a pace during the present decade that perhaps only those actively concerned are aware just how great the changes have been. Any attempt to state the current position in general terms might fail by reason of the differences of interpretation between the various schools of pharmacy. For that reason we asked the staff of a particular school—that of the new University of Aston in Birmingham—to write on their approach to the academic training of the pharmacist who will be practising in the 1970s and beyond.

Aston is one of the institutions that gained their academic freedom as a result of the Robbins report on Higher Education in 1963; others have achieved it under the auspices of the Council for National Academic Awards. Differences between the courses now being offered and planned are an encouraging sign that the freedom to make changes is being used, and that a critical analysis of earlier pharmaceutical teaching methods has been carried out. The problem facing the planners, as Professor Harper says in his article, is to decide just what a pharmacist is. In the past the pharmacist had a basic training that allowed him to branch out into many areas, but each of those areas is rapidly becoming so specialised as to require specialised training for its entrants. As the schools seek to fulfil that need, an increasing burden is placed upon the Pharmaceutical Society to ensure that the degrees accepted for registration purposes are generalised enough to enable the holder to carry out his duties in any branch of the profession.

Academic education has, of course, in recent months received a great deal of attention, but in the rush for higher academic standards it is pleasing to note that the period of practical training is not being overlooked. At the recent conference of the British Pharmaceutical Students' Association (see *C. & D.*, April 15, p. 361) it was stated that the school of pharmacy at Sunderland has under consideration a training period "integrated" with the academic course. Any such proposals are bound to encounter opposition from those who believe that the pharmacy qualification will have the standing of other university degrees only so long as it is wholly academic. On the other hand, the arguments for "sandwich" courses, put forward by Mr. Oliver on p. 472 will, we feel sure, find favour among many practising pharmacists. In the final analysis it is what the graduate knows, and how he is able to apply his knowledge,

rather than the manner of his teaching, that determines the standing of his profession. We believe that this new approach is at least worthy of trial.

After Turnberry

THE success of the Franco-British Pharmaceutical Congress is often measured in social rather than in pharmaceutical terms. The recent Congress at Turnberry (see p. 480), though again a socially successful occasion, is likely to be principally remembered for the more pharmaceutical parts of its programme.

Agreement appeared general that the topic chosen for the "business" session, "The Arts and Pharmacy," was rich in interest. In the wrong hands the subject could easily have become a wearisome recitation of literary or artistic facts, or alternatively a showing of slides and transparencies to excess. Instead, the four papers, two each from France and Britain, formed a captivating quartet, each awakening a new awareness of an aspect of literature or painting, none conveying the impression that the subject had been exhausted at a single airing, while the wonderful collection of transparencies projected by M. Martinot brought delight and enchantment.

Those who have the responsibility for choosing topics and speakers for the Congress symposia may be supposed to face double the problem presented to any "unilateral" organisation. They are therefore entitled to double commendation when, as this year, their choice has proved so patently popular. The four authors deserve the warmest congratulation on the way they infected the audience with their enthusiasm. Between them they demonstrated that pharmacy is so much more than a mere craft or profession, having subtleties and potentialities that are lost to any pharmacists who restrict their horizons to the mere day-to-day practice of their profession. Such pharmacists, if there are any, deprive themselves of the important impact that the professions and arts are capable of having on one another. The papers illustrated one or two of the ways in which they might broaden their interest, enjoyment and advantage. The experience, particularly of seeing on the screen the art heritage of the pharmacies of a number of French hospitals, is one that, since the records are now permanent, other pharmacists should be allowed to share (Blackpool, please note).

Many at Turnberry felt that along the lines of the 1967 programme, rather than in those realms of scientific pharmacy that are properly the province of other national and international pharmaceutical organisations, lay the pattern for future Franco-British Congresses. Looking back, it seems even surprising that a Congress whose proud claim to fame is that it is almost uniquely the outcome of an understanding on the parts of the then governments of the two countries to promote bodies devoted to culture-exchanges should have taken so long to come round to the subject of "Pharmacy and the Arts."

ECHOES OF THE PAST DEAFNESS FROM WAX

From "PRIMITIVE PHYSICK: or, an Easy and Natural METHOD of Curing Most DISEASES" by JOHN WESLEY, London, 1772.

SYRINGE the Ear with warm *Sage Tea*:—Tried.

Or, put in wild *Mint* bruised, with the Juice, changing it often.

HOSPITAL PHARMACY FORUM

"APPLIED" PHARMACOLOGY

THE recommendation (C. & D., April 15, p. 359) that the Pharmaceutical Society should set up a committee of pharmacologists in industry, teachers and hospital pharmacists to investigate the pharmacist's rôle in applied pharmacology is welcome even if somewhat belated. Views very similar to those expressed by the *British Medical Journal* in its leader on the "Future of Clinical Pharmacology" were put forward by the *Lancet* several years ago but, because the pharmacist was not specifically mentioned, they gave rise to little comment. Nevertheless they left no room for doubt about what was intended, and in the intervening period medically qualified pharmacologists have been pressing ahead with their plans for the establishment of a hospital pharmacological service.

One suggestion which the committee must obviously consider is that applied pharmacology should be included in the curriculum for a first degree in pharmacy, or alternatively that it might be a suitable subject for post-graduate study, to be followed by the award of a higher degree or diploma. The idea is obviously attractive but in practice it would present some difficult problems.

In the first place the Society is about to give up its function as an examining body, and in consequence its power to decide on the syllabus to be followed for a degree that will lead to registration as a pharmacist. It could, of course, refuse to recognise a degree that did not require that the candidate should be examined in applied pharmacology, but the use of that power is, to say the least, unlikely.

Secondly, most pharmaceutical educators are of the opinion that the course already covers so much ground as to make it impossible to deal with any subject in depth. Obviously students must be given a thorough grounding in pharmacology before they can be taught to apply their knowledge. We must therefore ask ourselves whether the addition of a further subject can be justified.

Who Shall Teach?

Most difficult of all, however, is the question who is to teach applied pharmacology to pharmacists. Here let us not bandy about with words. The term "applied pharmacology" has only one meaning, namely the application of pharmacological principles to the use of drugs in the treatment of disease. No non-medically qualified pharmacist has, or can have, any first-hand experience in that field. Such knowledge as he may have must have been picked up from books and papers by medically qualified authors — sources that are equally available to his students.

We are therefore faced with the fact that the inclusion of applied pharmacology in the pharmaceutical curriculum, either at undergraduate or at post-graduate level, necessarily means the employment of medically qualified teachers who, because they have access to clinical material, are in a position to undertake research and keep abreast of developments in a field where knowledge is increasing at an unprecedented rate. A non-medically qualified teacher who was denied opportunities for research in his specialty would soon become stale, and the quality of his teaching would inevitably deteriorate with time.

In universities that include both a faculty of medicine and a school of pharmacy, suitable teachers are already available and, if the medical school authorities can be induced to co-operate, it should be possible to organise a course in applied pharmacology suitable for pharmacists. However, applied pharmacology, like any other applied subject, cannot be taught exclusively by means of formal lectures. Students must be given an opportunity to apply their knowledge in practice and access to patients is essential for that. Otherwise all the student can do is to commit

to memory long lists of factual data and technical terms relating to a field of work the doctor claims as his preserve.

Colleges of Advanced Technology and universities without a faculty of medicine would find it even more difficult to provide students with a sound training in applied pharmacology. The teaching staff, as a rule, are not medically qualified, and in consequence have no access to patients and no opportunities to engage in research in the field of applied pharmacology. The University of Bradford has an arrangement that permits a limited number of students of pharmacy to "sit-in" with general practitioners during clinical sessions, but it is not claimed that it constitutes a training in applied pharmacology. After all, general practitioners tend to refer to hospital patients who might present interesting problems in applied pharmacology.

No Easy Solution

It is hoped that sufficient has been said to make it clear that the proposed committee is faced with a formidable problem. Nevertheless it should resist any temptation to make recommendations that could only turn the pharmacist into a second class clinical pharmacologist—a man who knew all the right words but was immediately exposed as an impostor when faced with a real problem.

The inclusion of hospital pharmacists in the membership of the committee should ensure that the committee is made and kept aware of the fact that conditions in hospital are very different from those which apply in the industrial and academic spheres. The N.H.S. regulations make hospitals what the Grosset Committee aptly termed "an exclusive environment for doctors". The administrative structure has been designed to perpetuate the supremacy of the medically qualified. In consequence, it cannot be stressed too strongly that the pharmacist can only play the rôle of an applied pharmacologist with the full approval and consent of the organised medical profession. Let there be no mistake about it. It is not the Society or the Guild, or the Ministry or the Regional Hospital Boards but the doctors who will ultimately determine the rôle of the hospital pharmacist, and for that reason alone the inclusion of an influential and eminent clinician amongst the membership of the committee might well be desirable.

The real danger is that, once the formidable nature of the remit is recognised, the committee might be content to make recommendations consisting of nothing more than pious hopes for the future. This time something more is wanted. One university has already organised a post-graduate course in clinical pharmacology for which a medical qualification is an essential condition of entry *because the course will involve access to patients*. Within the next two or three years those who have completed the course will be looking for jobs, and pressure will be brought to bear on hospital authorities to provide them. Once a consultant clinical pharmacologist has been appointed to the medical staff of a hospital (and we may see the first such appointment during the current year) the pharmacist is out of the race. Money to provide laboratory accommodation, staff and equipment will suddenly be conjured up out of thin air and speedily the take-over will be complete.

If the committee has some unpalatable home truths for us let us hope that it will speak without equivocation. The hospital pharmacist desperately needs to know where he is going and it is high time for him to be given a little guidance. Does he perhaps set his sights too high? Should he be content with a rôle as the buyer of drugs and the dispenser of prescriptions? Let us hope that the committee will provide the answers to these and related questions causing concern in hospital pharmacy. We have a right to be told the truth even if it hurts.

Expansion Without Loss of "Personal Touch"

SITE AND "PSYCHOLOGY" FACTORS IN A SUSSEX REFIT

AN expanding business in restricted premises with inadequate access to storage facilities above a small shop creates difficulties not only for customers but also for even the most willing of staff. Faced with that situation, and believing that an efficient pharmaceutical service demands satisfactory conditions for those on both sides of the counter, Mr. J. E. Head, M.P.S., Forest Row, East Sussex, was quick to accept the offer of new premises merely 30 yards away from his pharmacy. He was even more enthusiastic when it was realised that, by amending plans, he could take over an area previously allocated to two small shops and build one pharmacy upon it.

The site, which was approximately 9ft. deep with a frontage of approximately 45ft., posed two special immediate problems: it sloped, and access had to be provided to the two flats above the shops.

Mr. Head decided to seek the aid of the N.P.U. shopfitting service and, with the Union's Mr. Long, worked out some preparatory specifications and obtained estimates. The contracts were finally placed with Burn Shopfitters, Ltd., Essex Place, Chiswick, London, and Counterpoint Store Equipment, Ltd., Southend and J. Sargeant & Co., Forest Road, Sussex.

The pharmacy has two entrances, each flanked by a large "picture" window separated by entrances to the flats above. The doors are of plate glass and mahogany and the window surrounds are of aluminium.

Spacious

Whichever entrance he uses the customer enters a space that allows more than adequate freedom of movement, the spaciousness being further emphasised by the lightness of the Counterpoint wall fittings in oak.

The staircase to the flats above breaks the shop of course into two areas, both large, which are connected by a narrower strip across the back of the shop. The division of the shopping space automatically enabled a happy arrangement of the shop into a section devoted to cosmetic and toilet prepara-

tions — Mr. Head holds a number of cosmetic agencies — another area housing dietary, diabetic, first-aid, household and veterinary products, while along the back of the pharmacy there are the counters for the sale of proprietary medicines, etc.

Mr. Head's is a personal business in a way which in his opinion, was enhanced by the previous confined premises and one of the ways in which he has attempted to ensure a continuation of that aspect, in spite of the much larger new premises, has been by having a suspended ceiling installed. Constructed of white polythene ceiling ties it cuts down appreciably the original height and avoids the "store like" impression that might have been imparted by the large amount of space left free for customer movement.

Lighting

Adequate — indeed ample — lighting is achieved by neon tubes on the ceiling and by illuminated canopies above the fixtures. The light clean aspect of the shop is further enhanced by the white plastic backings to the fixtures. A contrasting black "kick strip" protects the base of the fixtures, and the shelf edging is in black with contrasting white price tickets. The customer area in front of the dispensary is so generous that recently Mr. Head was able to use it for a "mini" Medicines With Care exhibition, displaying a number of the screens from the Pharmaceutical Society's exhibition without causing any hold-ups in normal business. The dispensary has an "open" window, allowing Mr. Head to keep a watchful eye on activities in the shop. In that it has a tendency to encourage customers to talk to him it is perhaps too low, but experiments are in hand to overcome that difficulty. The dispensary is compact, with two separate plastic top dispensing counters in blue. Sliding storage shelves bring tablets etc., easily to hand. An electric water heater supplies hot water to the sink.

At the rear of the shop are two storage areas, toilets, and another small area that provides office accommoda-



PROMINENT: The sign leaves no room for doubt concerning the business carried on, it also combines the windows separated by the entrances to the flats above.

tion and leaves space for special beauty demonstrations, etc. Heating is by electric fans at canopy height operated by time switches.

The sign above the doors is in three sections. Central emphasis is placed upon "Pharmacy." A unique touch is that the background of the outer section of the sign is in a mustard-colour that matches the shop floor tiles.

The return wall at the right of the left-hand door is finished in mosaic tiles in grey white and black, giving an overall grey effect. A carboy and "J & P Head, Ltd.," in small green mosaic tiles have been included in the design.

It is about eight months since Mr. Head, his staff and their friends moved the stock into the new premises. They had hardly sorted things out before the Christmas rush enveloped them and since then they have been trying to evaluate the new techniques and opportunities now available in their new surroundings.

Two Ratings

The success of any shopfitting scheme may be measured by two ratings: customer reaction and staff appreciation. It is relatively easy to correlate the first value with increased turnover, and Mr. Head is happy about the results so far achieved. The second rating is no less easily ascertained from the enthusiasm that is so evident among the staff.



INTERIOR VIEWS: At left the dispensary flanked by carboys. At right the section devoted to cosmetic and toilet preparations.

UNDER HANDICAPS ALL ROUND

Chemists in Eire discuss trading difficulties

A STRONG appeal was made by MR. M. L. CASHMAN (president, Pharmaceutical Society of Ireland) at the Irish Drug Association delegates' meeting in Dublin on April 30 (see also *C. & D.*, May 6, p. 414) to all rural pharmacists to participate in the forthcoming Animal Hygiene Week. He said the I.D.A. was co-operating wholeheartedly, and that showcards and pelmets were being sent to 800 pharmacists, and the Pharmaceutical Society of Ireland was bringing out a booklet for the Week. MR. W. J. GARDNER (president, I.D.A.), endorsing Mr. Cashman's appeal, reported considerable dissatisfaction regarding manufacturers' prices for veterinary medicines. Different firms, he said, appear to be charging different prices for similar drugs.

Referred to the Society

MR. J. F. SHINE, Wicklow, said that one firm was dealing direct with the farmers, quoting keen prices. MR. M. B. BROPHY said that the selling of poisons from vans had already been referred to the Society. Every means, even private detection, should be employed to defeat the practice. MR. CASHMAN said that, unless some farmers co-operated and produced receipts no case could be sustained in court. MR. BROPHY said he appreciated the difficulty, but the Society would never get evidence if it waited for someone to come forward.

MR. W. D. NOLAN, Ballytore, said the real difficulty was to prevent price-cutting among pharmacists in order to meet the unfair competition. MR. BROPHY considered pharmacists should have some protection under which a *garda* could inspect vans selling poisons.

Two country chemists he had spoken to had said they had "10 per cent. to play around with." That allowance applied only to a big order, said MR. NOLAN. "Why give it away?" MR. F. O'REILLY, Naas, said the firm in question had written to local chemists pointing out that they were far behind the times. It was hard that a chemist should have to let a customer go where he could get a cheaper price. MR. KENNEDY said the van was losing money and a change was quite possible. MR. O'REILLY said wholesalers could put financial pressure on the company. The real power, said MR. BROPHY, lay with the manufacturers. The Committee is to consider the matter further.

THE PRESIDENT said members were annoyed at the failure of manufacturers to supply literature with "ethical" preparations or to supply less than 100 tablets where perhaps only twenty had been ordered. It was unsatisfactory not to be able to tell the dosage when a doctor rang up late at night. The Association was trying to get manufacturers to co-operate. MR. BROPHY objected to the principle as well as the manufacturers' attitude. Some companies apparently considered pharmacists meant nothing to them. Pharmacists, who were entitled to the literature, were becoming mere technicians.

MR. M. A. HUGHES, Portlaoise, mentioned the reluctance of some pharma-

cists to charge a dispensing fee where the name of the product appeared on the packet, but MR. D. O'SULLIVAN said that that should make no difference. Records often had to be kept, and pharmacists' right to charge a dispensing fee was not affected by the patient's knowing the name of the product.

One delegate considered it unlikely that English manufacturers would bring out a special pack for the Irish market. Possibly, with many firms packaging in Ireland, a special pack might come to be produced in the Republic.

MR. R. C. O'HIGGINS said that pharmacists could tell representatives they would not take large quantities. The possibility of accepting less profit and increasing the professional fee should be considered.

THE SECRETARY (MR. B. R. SMITH), said that the Cork delegates, who were unable to be present owing to the death of one of their colleagues, had intended to propose increasing the fee to 5s. Dublin pharmacists had agreed that the 3s. 6d. fee was not enough. THE PRESIDENT supported, saying that overheads had increased considerably in recent times.

Considering the difficulty encountered in getting some pharmacists to charge the current fee, one member saw little point in increasing it. MR. BROPHY said that when the 3s. 6d. fee was introduced he had favoured all pharmacists putting a notice to that effect in their windows so as to accustom the public to it. Before advancing the fee to 5s. they should make sure that everybody would charge it.

Replying to a delegate who said that pharmacists were being penalised by being obliged to give evidence against themselves, MR. CASHMAN said it was pertinent to look at the terms of the White Paper on the health service. In terms of doctors it was described as "practical," in terms of pharmacists it was "if feasible and economic." A crisis was imminent in pharmacy, and the

Council was preparing a memorandum for the Minister. At present the predominant age group in pharmacy was the over-50's. In fifteen to seventeen years, according to statistics, the number of pharmacists would diminish by two-thirds. If the Minister wanted a pharmaceutical service it must be economically rewarded. The Department appeared to be confused in quoting an annual turnover of £9 millions for pharmacists, since the bulk of that figure applied to non-pharmaceutical goods. The need for an efficient pharmaceutical service was evident from the strong representations the Society had received from the planning officer of co. Mayo for a pharmacy to be opened in one part of the county. "Only when the pharmacist was gone was it realised that he had been a help. He is only being used when the necessary requirements cannot be got elsewhere."

MR. J. P. BURKE, Dublin, said that an outsider must surely come to the conclusion that pharmacists were a weak lot. Training was largely responsible. Pharmacists were regarded as an ancillary to the medical and related professions. They had little autonomy and were dictated to by manufacturers and doctors. While the proposed increase in fee was idealistic, the time was not opportune for it. A recent survey by the Practice of Pharmacy Committee had shown that one-third of all pharmacists were not charging the professional fee. "In those circumstances it would be suicidal to increase it."

THE PRESIDENT said the Association would have to refer to the fee in the next prices change and the organiser would have to consult with those not charging it. MR. KENNEDY wondered, in view of the poor attendance, if two delegates' meetings a year were justified. MR. SMITH said that almost 30 per cent. of Associations were represented. Despite the small attendance he would not like to see delegate meetings discontinued. Many years ago it had been found that an annual meeting was insufficient.

CHELSEA SCHOOL OF PHARMACY

Three new courses in October

THREE new courses leading to University of London Master degrees commencing at the Department of Pharmacy, Chelsea College of Science and Technology in October were announced by PROFESSOR A. H. BECKETT (head of the Department) on May 3. He was speaking at the College's annual prize-giving. The courses would be in pharmaceutical technology, pharmaceutical analysis, and biopharmacy. The course in biopharmacy would be part-time for evening and half-day release students, and should attract pharmacists from hospitals and industry. Implementation of the courses would exacerbate space problems, but some relief was in sight, as the College had acquired certain properties within a reasonable distance—promising extra space in 1968.

Most important event during the department's thirty-third session, said Professor Beckett, was the successful outcome of negotiations between the

College and the University of London as a result of which the College had become, on August 1, 1966, a School of London University. The department of physiology and pharmacology had been made into two separate departments, with Professor Ginsburg as head of the pharmacology department. Entry into the University of London had caused some minor difficulties. In an attempt to give greater flexibility in pre-graduate subject requirements and to attract more entrants into pharmacy, it had been intended to accept mathematics at Advanced Level as an alternative entry requirement to a biological subject. Faculty regulations did not permit that to be done but the University had made a special dispensation to allow thirteen students accepted in October 1965 with Advanced Level mathematics to proceed.

The session 1965/66 had also seen the introduction of a revised syllabus for the B.Pharm. degree. Besides chan-

es in the curriculum, a first university examination introduced at the end of the first year of the undergraduate course would spread the examination load and enable students to change their course at an early stage if necessary.

Professor Beckett welcomed Drs. M. Fitchard, A. Rosen and Mr. I. Martin to the teaching staff and reported Drs. P. Earles and G. O. Jolliffe had been promoted senior lecturers. He wished Dr. A. F. Casy well in his new post at the University of Alberta, Canada.

Sixteen students had graduated with upper second-class honours, twenty-six with lower second-class honours and even with a pass degree. One student had been awarded the M.Pharm degree in research and ten the degree of Doctor of Philosophy. Among them were three staff members—he congratulated Drs. Metcalf (pharmaceutics), Phillipson (pharmacognosy) and Theodold (pharmaceutical chemistry).

During the year thirty-eight research publications had been submitted from the School as well as a number of articles and text books.

Tribute to Student Body

Professor Beckett paid tribute to Mr. C. Pearce, the Pharmacy Association's president, who had died suddenly during his term of office. Present students, under the chairmanship of Mr. Astill, had had a successful session, with two meetings during the year, one on professional matters and a scientific lecture. The student body would increasingly take part in arranging extra-curricular scientific lectures.

Professor Beckett then called upon Hugh Linstead to present the prizes as follows:—

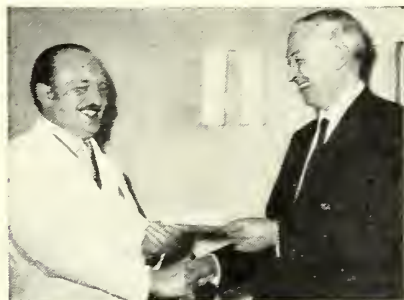
First Year. BOOTS, LTD. PRIZE (first overall student); WESTERN PHARMACISTS' ASSOCIATION PRIZE (pharmaceutics) and TIMOTHY WHITES & TAYLORS, LTD. PRIZE (pharmaceutical chemistry). — P. J. Houghton. SMITH, KLINE & FRENCH LABORATORIES, LTD., PRIZE (second overall student). — J. R. Britten. PARKE & CO. PRIZE (pharmacognosy). — Miss D. Salter. Second Year. TIMOTHY WHITES & TAYLORS, LTD., PRIZE (first overall student); HANS MEDICAL, LTD. PRIZE (pharmaceutics) and E. R. SQUIBB & SONS, LTD., PRIZE (pharmacognosy). — Miss T. C. Rothe. PFIZER, LTD. PRIZE (second overall student) and BOOTS, LTD. PRIZE (pharmaceutical chemistry). — Mrs. C. M. Newnham. Third Year. BOOTS, LTD., PRIZE (first overall student); TIMOTHY WHITES & TAYLORS, LTD., PRIZE (pharmaceutics) and CIBA LABORATORIES, LTD., PRIZE (pharmacognosy). — J. J. Burchell. BEECHAM PRIZE (pharmaceutical chemistry). — C. J. Johnson. UPJOHN, LTD., PRIZE (non-academic contribution to the School). — T. P. Astill.

SIR HUGH said Professor Beckett's survey of the year's work showed that he was looking at pharmacy whole — not only as an academic discipline but as a profession. Because pharmacy was diverse, some people tended to be afraid of it—but by that very diversity provided more opportunities for a career than almost any other academic discipline, and he could wholeheartedly commend it to school leavers. Diversity also tended to produce "centrifugal" forces tending to separate the various sections of the profession. It was good, however, sometimes to think of the "centripetal forces" such as the single qualification. He believed that those would always prove the stronger.

MANUFACTURERS' ACTIVITIES

Cost-cutting Suggestion Rewarded.—

Mr. G. Kirby, a works technician at The British Drug Houses, Ltd., London, N.1, has received the highest-ever suggestion-scheme award to be given by the company. His suggestion for a



Mr. Kirby receives his cheque.

modification of the established technique for the purification of stilboestrol during the final stage of manufacture has, over a period of months, resulted in a substantial increase in yield and decrease in cost of production. A cheque for £300 was presented to Mr. Kirby (left) on May 4, by Mr. H. G. Rolfe (deputy managing director).

Launching Conference. — The directors of the Supervite Manufacturing Co., Ltd., held a launching conference for their United Kingdom sales force on April 22. The representatives flew in from all over the country for briefing on the marketing and promotion plans for the Pino Silvestre range of men's toiletry products manufactured by Vidal of Venice. Mr. R. D. Henry (managing director) explained that the company's intention was to make the range available on a restricted distribution basis.

Manufacturers' Trophy Award. — The "Gnome" cup racing trophy, donated by Mr. H. Loebstein (chairman of Gnome Photographic Products, Ltd., 354 Caerphilly Road, Cardiff), was presented recently to Mrs. E. Cousins, wife of the winner of the 1967 race at Chepstow in February. A Gnome Super Classic slide projector each were presented to trainer and jockey.

Long-service Club Dinner. — Eight new members were welcomed to this year's twenty-five-years-service club dinner of Horlicks, Ltd., on April 21, by Mr. W. R. Bowden, one of the club's founders and a director of the company, bringing the total number of members to 154. Between them the club's members, now 154 strong, have logged 5,253 working years on behalf of the company.

Trophies for Dancers. — Ovaltine trophies for ballroom dancing championships organised by Mecca Dancing, Ltd., and held recently at Wembley, were awarded by Dr. Albert Wander (managing director, A. Wander, Ltd., 42 Upper Grosvenor Street, London, W.1), to George Coad and Patricia Thompson, who retained their title as world's amateur champions of modern dancing; and to Bobbie and Bill Irvine, winners of the star United Kingdom professional nine-dance trophy.

Symposium on Shop Modernisation

—First of a series of symposia aimed at persuading small retailers to renovate their shops was held by Alcan (U.K.), Ltd., in Leicester recently. After an introductory address on the benefits to be gained from modernisation and the advantages of aluminium shopfronts a condensed version of the film "Vision in the High Street" (C. & D., January 7, p. 14) was shown. Representatives of sixteen local shopfitters and eight manufacturers of aluminium



shopfronts were present to discuss problems of retailers who attended. (A separate meeting for shopfitters and local architects had been held the previous day). During such symposia a rapid design and estimating service is made freely available for the week, and retailers are offered incentives, in the form of free advertising in the local Press, to renovate within six weeks of the event.

Daily Pollen Count. — Between May 1 and July 31 this year Smith Kline & French Laboratories, Ltd., Welwyn Garden City, Herts, are issuing daily pollen counts obtained from a Hirst spore trap. The illustration shows the apparatus installed on the roof of the company's 120-ft. tower block and a research institute assistant removing the coated slide on which 24-hours' intake of pollen is impacted. The daily count is undertaken by Dr. Elizabeth Goodhew, a botanist who operated the well-known St. Mary's Hospital trap at the Wright-Fleming Institute of Microbiology for four years after its introduction in 1957. Each day's count becomes available to doctors, researchers and the local Press by early afternoon on the day of the collection.



While in operation a coated microscope slide is, over 24 hours, drawn up 2 in. past an intake slit. The U-tube (centre of picture) contains a flow-meter for adjustment of air intake, corresponding approximately to the amount of air an adult inhales.



A QUARTET OF PICTURES FROM TURNBERRY: Scenes during the excursion to the Isle of Arran.

Photos: E. J. Wright.

Uncle Ponderevo, inventor of the 'patent' medicine 'Tono Bungay', as a charlatan and a rogue."

The moderns were fascinated by poisons, as were their predecessors, but were much more up-to-date. Hyoscine was perhaps the most popular with the "whodunit" experts, who followed the lead set by Sherlock Holmes, but the latest style in "whodunit" poisons were proprietary substances invented by the writer, which had any properties needed to help the plot along. Those writers also usually tended to make their pharmacists figures of fun, but on the rare occasions when pharmacists were portrayed as educated men of strong character, then one could be sure that they would be later revealed as cold-hearted murderers!

Mr. Holland continued that one fictitious chemist, a certain Thomas Graffin, was later — thanks to Charles Dickens — to become of practical help to the Pharmaceutical Society. At the celebrated trial "Bardell v. Pickwick," when Mrs. Bardell, Mr. Pickwick's landlady, under the influence of those two rascally lawyers Dodgson & Fogg, had sued for breach of promise, Graffin, when being sworn as a jurymen, had asked to be excused on the grounds that he had no assistant. The judge failed to be convinced, and ordered him to be sworn as a juror. "Very well, my Lord," replied the chemist in a resigned manner "Then there'll be murder before this trial is over, that's all. Swear me if you please, Sir," and sworn the chemist was before the judge could find

words to utter. "I merely wanted to observe my Lord," said the chemist with great deliberation, "that I've left nobody but an errand boy in my shop. He is a very nice boy, my Lord, but he is not acquainted with drugs; and I know that the prevailing impression on his mind is that Epsom salts means oxalic acid, and syrup of senna laudanum. . . . That's all, my Lord."

That purely fictional account was said to have directly influenced the ruling that the pharmaceutical chemists in England and Wales needed no longer to serve on juries—a state of affairs that still existed.

Through the "Pharmacists Anthology" series published in THE CHEMIST AND DRUGGIST, Mr. Holland said he had found one example of a poem written by a young pharmacist. It was a clever parody on Kipling's "If."—

If you can roll out pills when all about
you
Are losing theirs and blaming it on you;
Or analyse a salt so none shall doubt
you
When you arrive to join the waiting
queue;
If you can learn and not get tired
of learning,
Nor nod in lecture with half-closed eyes;
If you can work till 2 a.m. by burning
The midnight oil, yet with the lark still
rise;
If you can prove your diagrams botanical
Are faithful reproductions of your slides;
If you are sure Red Kousso is a panicle,
And can name its source and habitat be-
sides;

If you appreciate the hidden beauties
Of coc. mag. t.d.s. p.c.,
And consider it the pleasantest of duties
To recite from end to end your friend
B.P.

If you impress your reverend examiners
That everything you ought to know, you
know;

If you can write a monograph on
laminas,
And mark the three divisions of the sloe;
If nothing is too ultra-scientific,
If every answer's right and none a guess,
Your brain may need a powerful
soporific.

But anyhow, you'll be an M.P.S.!

Those verses, said the speaker, were written in 1922 and first published in the *Square Magazine* of the School of Pharmacy; the poet's name: Hugh Linstead.

Third paper in the series was "Literature and Pharmacy" by Mon. Jean Hourticq (*Counseiller d'Etat*). In it the author recalled that pharmacy was born out of the splitting-up of medicine in its widest sense and that it was a great pharmacist of the eighteenth century, Demachy, who made that clear in his *Manuel du Pharmacien*.

A doctor, Guy Patin, more celebrated for his wit—and "truth to tell for his lack of charity"—than for his science, wrote in 1665 of the apothecaries as "extremely cunning animals," adding "We are tired of their crude tyranny and their empty pretentiousness."

Parmentier (1737-1813) had the reputation of an announcer at a recep-

tion. One phrase embodied his attitude: "The people's food is my deep concern." His works, numerous and thick, had no other purpose, they came from the pen of a pharmacist who was at the same time a philanthropist.

Nicholas Vauquelin (1763-1829), the discoverer of chromium, was a man of the laboratory. His quite considerable writings were papers with precise objectives. His "Assayer's Manual" made an interesting contribution to literature.

Mr. Hourticq referred to contributions by Gassicourt, and then turned to the names of Pelletier (1788-1842) and of Caventou (1795-1877) who devoted the best part of their genius to quinine, and then to Emile Bourquelot (1851-1921) who taught at the school of pharmacy, Paris.

The speaker next dealt with "the likeness of the pharmacist as it emerges under the pen of writers and dramatic authors." The fables of the Middle Ages, he said, had their fun at the expense of the apothecaries, as of every other group of craftsmen. The sixteenth century, learned and malicious at the same time, spared them, but "One cannot say as much of the next century. Our greatest comic author, Molière, ferocious against the doctor, was a little rough on the pharmacists."

Flaubert's Unfortunate Model

Flaubert, in the work that made him justly famous, "*Madame Bovary*," described M. Homais, the pharmacist of Yonville, and his pharmacy in minute detail, and *Larousse Illustré*, a dictionary, did not hesitate to say of the subject: "Monsieur Homais, type created by Flaubert in *Madame Bovary*, pharmacist and free-thinker, personifies middle class stupidity with a veneer of literature and science, a fool compounded with half a wise man." There was no doubt that that had harmed French pharmacy. "Too many people generalise readily and are too lazy to think for themselves. They are quite happy to stick a label on an individual or a profession and so escape having to make personal investigations." In his heart, every pharmacist would regret that M. Homais occupied so prominent a place only because he was unique.

Alphonse Allais (1854-1905), the son of a pharmacist in Honfleur, was one of France's most celebrated humourists. Every literary critic had commented on his pronounced taste for what might be called scientific humour. "His application for a patent for 'an aquarium of opaque glass for the use of timid fish' is the model of the kind."

In the last paper, presented by Mr. LESLIE G. MATTHEWS, the speaker said that British pharmacists with leanings towards art had chosen for the most part to show more interest by their appreciation of the works of the professional than by active participation in sculpture or painting. Mr. Matthews knew of no art club run by pharmacists comparable with that of the Medical Art Society, which held frequent exhibitions of its members' work.

"Has the camera become such a familiar object in pharmacy that it is now the only medium?" he asked.

Professor Vincenzo Bianchi of Pavia was a pharmacist and distinguished pharmacologist of no mean ability, dedicated to his work, but found in the cultural side of life a stimulant that maintained him throughout his career. He played a great part in developing the Turin Museum of Pharmacy, and his literary output was considerable.

Culture for the Pharmacist

Culture for the pharmacist took many forms. To Wilson Peck, "a pharmacist of our own day," it had been the lifelong study of English copper and bronze coinage, and had led to his publication, at the suggestion of the British Museum, of a monumental work upon the subject. Many pharmacists were collectors of art in different forms: Saville Peck, of Cambridge, had mortars that were the finest in the country; Geoffrey Howard, almost but not quite a pharmacist, had a renowned collection of drug jars and Stuart wine cups that filled his entire home. No wonder that, when Howard wrote his book on "Early English Drug Jars" in 1931, he dedicated it to his wife "who gave him his first drug jar and who has regretted it ever since." A large part of the Howard collection, with Saville Peck's mortars, were now prized objects in the Pharmaceutical Society's Museum in London. Mr. Matthews' paper referred to three conspicuous pharmacist picture collections of international repute. The house of Jacob Bell, a founder of the Pharmaceutical Society in 1841, was full of paintings by the accepted masters of his day, and at his death in 1859 the nation gladly received them under his will. Dr. Maurice Bouvet, for long president of the French History of Pharmacy Society, had got together, in thirty or so years, more than 5,000 pictures, prints, drawings and caricatures relating to pharmacy. The collection proved an invaluable source of material for almost any study. Sir Henry Wellcome's collection of paintings and drawings was closely related to medicine and pharmacy, and he chose to leave aside the master works and the impressionists then being bought by his contemporaries. Wellcome did not buy his pictures primarily as works of art but to illustrate aspects of medical history.

Mr. Matthews showed a series of slides of paintings from the seventeenth to the nineteenth century from Sir Henry Wellcome's collection.

During the discussion Mr. A. H. BRIGGS, Slinfold, Sussex, asked if any Burns scholar could say whether the "Bard of Turnberry" had mentioned pharmacy, and if so, whether a translation could be provided. Mr. Briggs pointed out that Agatha Christie had for some years worked in a hospital pharmacy department. It was therefore not surprising that her descriptions of drug poisonings were accurate. Apparently Sir Hugh Linstead could be called the "Bard of Bloomsbury." Had

he had any other contributions published?

MR. MATTHEWS recalled that Sir Hugh had written the "book" of a play produced when the Jacob Bell centenary was celebrated in London.

MR. J. TRISTRAM said that Sir Donald Wolfitt, commenting on that play, had said he had just come from playing Shakespeare "and the contrast between the authors was not marked."

SIR HUGH Linstead begged those present to "spare him of his juvenilia." He then praised the erudition of the papers that had been presented. He found the papers so fascinating that translating was an enormous pleasure. The papers also showed there were more important things in pharmacy than pharmacy.

MONSIEUR MARTINOT suggested that the congress had stumbled on a new formation. The type and quality of the papers "were much to be preferred to the benzene ring." Other bodies could deal with the scientific and professional subjects. Here was an extremely wide field that could fill many more congresses for years to come.

MONSIEUR ROGER BLANC suggested another aspect of literature—the old pharmacopoeias and formularies might be worthy of study.

DR. Y. CLEMENT wanted some genius to consider writing a concerto dealing with pharmacy, prompting Sir HUGH Linstead to comment that the Franco-British Congress would try to see that such a work was suitably presented.

MONSIEUR FRANK ARNAL referred to M. Bouvet's collection of books that was being housed by the *Conseil National de l'Ordre des Pharmaciens*. The collection was an important one and he hoped everybody would be able to see it.

At the end of the morning session DR. BEAN gave a reminder that the Order of the British Empire had recently been bestowed upon M. Frank Arnal, whom he then presented, on behalf of the British congressists, with a copy of a recent book by Frederick Wood entitled "*The Chapel of The Most Excellent Order of the British Empire*," dealing with the chapel in St. Paul's cathedral. M. Arnal then made three presentations. He gave Dr. Bean, with the compliments of the *Conseil National de l'Ordre des Pharmaciens*, a copy of *Figures Pharmaceutiques Française*; to Sir Hugh Linstead a copy of Daumier's *Gens de Médecine*; and to Miss J. Gale (secretary to Sir Hugh Linstead) a copy of *Grands Pharmaciens* by Paul Fougère.

Social Side

The congress was attended by more than 130, including fifty French pharmacists and their friends, among them Miss J. Gallian, French pharmacist who holds the Franco-British scholarship and who recently spent some time working in the laboratories of the department of pharmacy, Chelsea College of Science and Technology, University of London and is shortly joining the laboratories of Macarthy's, Ltd., Romford, Essex, in order to gain experience in England.

On Saturday morning, May 13, members attending the conference left Turnberry in coaches for Fairlie, where they embarked on the motor vessel "Glen Sannox" for Brodick in the Isle of Arran. A coach tour of the island was interrupted at Lochranza where were distributed "*boîtes pour deux*," revealing, when string and paper were removed, packed lunches. The hardy sat on the rocks to enjoy their repast. Others found spots away from the slight breeze. The coach tour then continued through Pirmill, Whitefarland and Machrie to Blackwaterfront, where tea was available at the hotel. Because members of the public were also staying at the head-

quarters hotel at Turnberry and using the same dining room, the usual speeches at the Congress dinner were cancelled. Instead, informal dances were held on both Friday and Saturday evenings. After dinner on Sunday, Monsieur M. P. Martinot (*President d'honneur du Conseil Central des Pharmaciens d'Officine*) showed a fascinating and impressive collection of coloured slides accompanied by music and descriptions in English recorded on tape. Viewers were taken on a tour embracing St. Germain-en-Laye, Troyes, Dijon, Besançon, Beaune, Lons-le-Saunier, Tournus, Louhans, St. Amour, Bourg, Belleville, Villefranche, Lyon, Beaujeu, Issoudun, An-

gers and Bauge and shown the drug jars, bottles, mortars, alembics, richly carved screens and other treasures, in the old hospital pharmacies of those towns. The programme lasted nearly two hours. Part of the commentary was given by M. Martinot's daughter and by Monsieur M. G. Viala (secretary of the French section, Franco-British Commission), with closing words by Sir Hugh Linstead. M. Martinot was given almost a standing ovation at the end of the programme. On Sunday afternoon members had the choice of a coach tour to Robert Burns' birthplace and Culzean Castle, or golf. Most, if not all, chose the sightseeing, despite the dull weather.

Blue-print Soon for Retail Pharmacy's Future

N.P.U. CHAIRMAN AND EXECUTIVE MEMBERS AT MALVERN

"STATE of the Union" reports were presented by the chairman and a number of members of the Executive of the National Pharmaceutical Union at an area meeting at Malvern on May 14. Between them they dealt with Union policy as a whole, with marketing policy, pharmacy planning, staff training and National Health Service topics of current interest.

MR. W. J. SANDLES (chairman, Worcestershire and Herefordshire Branch) welcomed the participants to Malvern and the chairman (MR. H. G. MOSS) gave the opening address. Mr. Moss said his audience might feel that the title he had given to his address, "We all have a Living to Earn," was so self-evident as to require little elaboration, but the ways of achieving it might be quite diverse. Some appeared to regard making a living as being almost of secondary importance when compared with the need to enhance professional image. Others said it was the first essential, implying that efforts towards improving the professional image were only of secondary importance. One candidate in the Council election had had the effrontery, in his policy statement, to state that, "like Mr. Harold Moss, I believe the first essential is to make a living." Mr. Harold Moss had never said that that was the first essential. The fact was that one had to look at professional and business aspects simultaneously in an endeavour to ensure the continued ability to make a living yet at the same time to enhance the professional side of the business.

With that object in mind the N.P.U. had set up its General Practice Advisory Committee. For twelve months the committee, of which he was chairman, had been endeavouring to establish a working blue-print of the lines along which general-practice pharmacy might best develop in order to achieve those two desirable objectives without detriment to one by the other. The committee's thoughts were now, however, sufficiently crystallised to be set out in a form for discussions with the Pharmaceutical Society. The committee felt that such matters should, as a point of principle, be shown to and discussed with the professional body before being published, just as it

would expect matters evolved by the Society and dealing with business or commercial aspects to be shown to and discussed with the N.P.U. before publication. Only by complete co-operation between the two bodies could satisfactory progress be made towards the aim of making general-practice pharmacy both profitable and professional.

It was now an exciting experience, Mr. Moss went on, to be a member of the Executive Committee. The N.P.U.'s team of executive staff were bubbling over with new ideas, and all eager and anxious to serve members.

Two matters likely to be assuming significance in the near future were resale price maintenance and medicines legislation. The N.P.U. was actively supporting the pharmaceutical industry in preparing its case for hearing before the Restrictive Trade Practices court. When the long promised White Paper on medicines legislation appeared it would be studied with great care and, if there were felt to be in it provisions inimical to members' interests, or an absence of provisions favourable to them, the Executive would naturally make its views known. The N.P.U. believed that, in the public interest, the sale of medicines should be restricted to pharmacies, but was sceptical whether the White Paper would propose much on those lines.

Today, concluded Mr. Moss, the Union commanded more respect than ever before. "We are going to keep it that way. We are going to see that, despite all the problems in retailing today, you will still be able to make a good living — in fact an extra or better living."

Marketing policy matters

Speaking to the title "The N.P.U. Means Business" MR. W. TALVAN REES (chairman of the Marketing Policy Committee), said the new symbol, already to be seen on pharmacy doors, was a carboy "after all." Two panels used in researches into a change of design had both (high-income and low-income groups alike) read into the carboy a symbol of reliability and dependability. Unfortunately they had also given pharmacies

an "expensive" image. The N.P.U. products were designed, said Mr. Rees, to capitalise on that image of reliability while disproving the "expensive" tag. The products protected members against price cutting, gave a corporate identity without loss of members' individuality, and provided good margins on competitively priced products, even on basic terms. The series comprised today about thirty product groups, with over 120 items. Such had been their success, even with the backing of only 50-60 per cent. of members, that it was now possible to employ outside experts in package design and in the production of display material. Maximum effect would only be gained if the public knew what was meant by "Obtainable from your N.P.U. chemist" and if the goods were available in every pharmacy. No member could complain of lack of activity in the N.P.U. products field. In January had been launched the 36-oz. Nu-flask, and he could now announce the addition of a 23-oz. flask. In February had come a Lanale hair spray, reformulated to meet consumer wishes and repackaged for present-day sales appeal. March had brought Chem-plus denture cleaner and cleansing cold cream "in second-to-none Wedgewood-blue pack." April had seen the launch of rubber gloves and whiter and softer Nucot wool, and May the launch of the "Professional" tooth-paste, Chem-plus anti-septic and Numist family deodorant. Quite new was a kitchen paper roll, and improvements in existing products would be announced from time to time. The Committee had been working on dispensing labels even before E. C. Tenner in the C. & D. had written urging the Executive to bring them into the 1960's.

Answering questions, Mr. Rees told MR. H. O. WALTERS, Wellington, that the committee saw no clear way ahead for a series of photographic sundries; Mr. S. G. Lloyd, Shropshire, that, as N.P.U. Holdings, Ltd., had a 25 per cent. stake in Maw's Pharmacy Products, Ltd., the Union had an interest in Maw's own products as well as those in the N.P.U. Series; Mr. J. H. ELLIOTT, Cirencester, stressed the difficulty of persuading assistants in

a large pharmacy to promote the N.P.U. products, and asked if a commission could be paid to influence them. Mr. Rees's answer was that that could be done by the pharmacist himself, but the Union was prepared to produce a "penny-on" sticker if there were a demand for it. He told MR. W. STANIER, North Staffs, that the new rubber gloves had been consumer-tested before release. What further products it was intended to introduce was best kept secret; and MR. G. E. VALE, Oxford, that to attempt distribution of the N.P.U. products through wholesalers would split volume. MRS. LUCAS-SMITH, Slough, commended the efforts of the Marketing Policy Committee but deplored split deliveries. Those MR. REES reminded her, were not unique to N.P.U. products.

No Early Press Advertisements

A motion put by MR. W. H. WEBB, Melton Mowbray, on behalf of Leicester and Leicestershire Branch "That the N.P.U. should give early consideration to implementing a Press advertising programme for N.P.U. products" was defeated, despite his lucid exposition of the economics of the suggestion. On the present basis the fund available for advertising, said Mr. Webb, grew slowly. If chemists would accept lower margins they could provide funds for promoting quicker turnover. It could be done by a surcharge on the invoice. MR. S. G. LLOYD said the effort would be wasted: it would not produce enough funds for worth-while advertising. MR. MOSS from the platform, indicated that an opportunity for advertising might arise at some time, but that Executive policy was to undertake no advertising until it was satisfied the benefits would be real. MR. REES said that the advertising of individual products was still a long way off. First objective was to convince the public that "N.P.U." really meant something.

Staff Training

The problems of staff training in relation to the requirements of the Industrial Training Act were reviewed by MR. H. B. COULSON (a member of Executive). From the start, said Mr. Coulson, the Government had intended that there should be an Industrial Training Board for the distributive industry, and the Board was likely to become the fifth to be set up. The Ministry of Labour had confirmed that pharmacy would come under the Board despite the Pharmaceutical Society's claim that as it was responsible for training pharmacists, it was by implication entrusted with the training of assistants. Even pharmacists themselves the Ministry had pointed out, came under the Act for their management as distinct from their professional training. Mr. Coulson continued that even before the Act the N.P.U. Company Chemist's Association and Co-operative Union had got together to provide their own training scheme. The Pharmaceutical Society had been invited to join but, bound by a members' resolution of 1953, had sent only observers, as had, on occasions, the Guild of Public Pharmacists and

Union of Shop and Allied Workers. When invited to do so the N.P.U. had joined the Retail Trades Educational Council, but had declined to join its deputation to the Ministry, believing the pharmacy needed its own I.T.B. The N.P.U.'s later separate deputation had not succeeded in convincing the Ministry on that score, though the Ministry had conceded that pharmacy was a special case and had suggested that the I.T.B. for Retail Distribution, when established, would probably set up a working party for pharmacy. The present thinking of the Pharmaceutical Assistants' Training Board was that the City and Guilds of London Institute should arrange the examinations for assistants. Two two-year courses were envisaged, each leading to a certificate — one (for assistants aged 15-18) in retailing routines, product knowledge of "traditional" merchandise and handling, but not dispensing, of medicines; and a second for dispensary assistants. The entrance level of students was a worry. The "three O levels" that had been suggested was impracticable. "We must do the best with what we have got." The course was in preparation but could not start before September 1968.

Pharmacists might be eligible for grants for management training, and the N.P.U. was looking at that aspect. Training under the Act would mean a levy on chemists, and the basis at present suggested was 1-2 per cent. of the payroll of a business. At first, for practical reasons, it might apply only in businesses with ten or more assistants. The Union was in favour of training hoping for rewards for both members and assistants.

Pharmacy Planning

Speaking on the N.P.U.'s activities in the field of pharmacy planning, MR. C. H. SMITH (a member of Executive) said the term meant much more than a new shopfront. It involved premises, stock, staff and turnover. In the Union's services on all those aspects it was not lagging behind the multiples, and members should never hesitate to ask for advice from headquarters.

MR. K. E. LONG (pharmacy planning executive) introducing the showing of a film on shop modernisation said that the planners at Southgate had been overwhelmed with inquiries, but the backlog was being overtaken and inquirers could expect visits soon.

When MR. W. J. H. EWIN, Abertillery, asked for N.P.U. pelmets to replace Kodak and Ilford pelmets, MR. SMITH replied that in the modernised pharmacy there were unlikely to be pelmets. He told Mr. Moseley that the Union would not be purchasing decimal tills in bulk but would be negotiating terms.

N.H.S. Topics

Final subject, National Health Service topics, was introduced by Executive member MR. G. T. M. DAVID, who said that the agreed annual review of remuneration had revealed that in 1966 there had been an insignificant overpayment. Returns from the

inquiry into chemists' costs were awaited but "idle time" was known to have been much reduced (14 per cent. to 8.2 per cent.). Among current problems health centres featured large. The N.P.U.'s policy was that Local Pharmaceutical Committees should be brought into discussions on their need and siting. Where present pharmaceutical services were inadequate local pharmacists must accept responsibility by arranging collecting points or setting up group pharmacies. On rural dispensing, another current issue, the N.P.U. had exerted constant pressure on the Ministry to make a statement. Pharmacists could do their bit to influence public opinion locally to counteract doctors' propaganda, through Women's Institutes and elsewhere, in favour of doctors' dispensing. On a third issue, "nomen proprium," the N.P.U. was not satisfied that more than 50 per cent. of the medical profession were calling for it and would be saying so in forthcoming discussions with the British Medical Association. MR. H. J. SAUNDERS, Cardiff, described health centres as a sinister development liable to deprive a chemist of his dispensing business overnight. Could not something analogous to the rural subsidy be devised to compensate those pharmacists affected? MR. DAVID did not think that the idea could be entertained, but it might be possible for the chemists locally to set up a group practice near the health centre. He told another questioner, that there was nothing in the Act to prevent a pharmacist entering the health centre as a contractor, but he did not think that desirable. Pharmaceutical service comprised more than dispensing and in any new housing development a chemist's shop was one of the first asked for. MR. A. J. EVANS, Stafford, thought the employment of a pharmacist in a health centre could only lead to a cut in remuneration. More should be done at headquarters to combat the idea, now prevalent apparently in Women's Institutes that dispensing by doctors was better than by pharmacists. MR. DAVID admitted that the doctors' propaganda had taken some effect before it was realised what was happening, but said it was now being countered. MR. MOSS added that the Central N.H.S. Committee had sent a circular to every Women's Institute setting out the facts of the situation.

"Positive Action" Demand

MR. E. C. E. WEEKLEY, Cardiff, said members should make such things known both to the N.P.U. Executive and to the Local Pharmaceutical Committee, from which constructive, positive action should be demanded. MR. D. B. ROGERS, (Worcester and Worcestershire) decided to leave for consideration by the Executive a motion he had brought calling for a reversal of decision on the 5-day week.

A vote of thanks to the local secretary (Mr. R. J. Kimberley, Bromsgrove) for the evident success in organising the meeting concluded the platform business. From the floor came a similar vote of thanks to the speakers.

TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are augmented before wholesale dealers receive the goods into stock.

LONDON MAY 16: With only second-hand sellers quoting Costa Rican **IPECACUANHA** on a forward basis, the spot position was again firmer by 1s. 6d. per lb. Both Peruvian and Canary Isles **COCHINEAL** were dearer by ninepence per lb. for the silver-grey varieties. Tinnevelly hand-picked **SENNA PODS** are now in short supply on the spot and 2s. 9d. per lb. would appear to be the level for pods of reasonable quality; no further supplies are expected to arrive before September. **GUM ACACIA** for shipment rose 2s. cwt., but lower were **PODOPHYLLUM Emodi** (by 5s. cwt.) and **Cochin GINGER** (by 10s. cwt.) Most **NUTMEGS** were reduced and **PERU BALSAM** fell threepence per lb.

ESSENTIAL OILS prices were repeated in a dull market.

Pharmaceutical Chemicals

BUTOBARBITONE.—B.P.C. 77s. 6d. per kilo for 25-kilo lots and over.

CINCHOCAINE.—HYDROCHLORIDE, B.P., is 850s. per kilo.

COCAINE.—35 oz. lots HYDROCHLORIDE, 105s. per oz.; **ALKALOID**, 115s. per oz. Subject to D.D.A. Regulations.

CYCLOBARBITONE.—Under 25 kilos; 70s. per kilo. **CALCIUM**, 70s. per kilo.

GLYCEROPHOSPHATES.—Per kilo in 50 kilo lots; **CALCIUM**, B.P.C., 28s. 2d.; **IRON**, 13s. 7d.; **MANGANESE**, N.F.X., 49s. 7d.; **POTASSIUM**, 50 per cent., B.P.C., 8s. 6d.; **SODIUM**, 50 per cent., B.P.C., 5s. 11d. and powder, B.P.C., 1949, 18s. 8d.; **GLYCEROPHOSPHORIC ACID**, 200 per cent., 10s. 8d.

HEXOBARBITONE.—25-kilo lots or over, 15s. per kilo.

HOMATROPINE.—16-oz. lots (per oz.); **ALKALOID**, 30s. 6d.; **HYDROBROMIDE**, 24s. 6d.; **HYDROCHLORIDE**, 28s. 6d.; **METHYLBROMIDE**, 5s. 6d.

METHADONE HYDROCHLORIDE.—Subject to D.D.A. Regulations 2s. 6d. per gm. for 100-gm lots.

METHYL PHENOBARBITONE.—B.P.C., is 67s. per kilo for under 50-kilo lots.

NARCOTINE.—**ALKALOID** and **HYDROCHLORIDE**, 399s. 6d. kilo.

OPIATES.—Home trade prices (per kilo) subject to D.D.A. Regulations.

	1 kilo and over		Under 1 kilo	
	s.	d.	s.	d.
ODEINE ...	1,093	0	1,939	0
ALKALOID ...	1,665	0	1,701	0
HYDROCHLORIDE ...	1,445	0	1,480	0
PHOSPHATE ...	1,665	0	1,701	0
SULPHATE ...	1,762	0	1,798	0
FORMINE ...	2,159	0	2,194	0
ACETATE ...	1,762	0	1,798	0
ALKALOID ...	1,762	0	1,798	0
HYDROCHLORIDE ...	1,762	0	1,798	0
SULPHATE ...	2,115	0	2,150	0
TARTRATE ...	2,229	0	2,265	0
THYMORPHINE ...	1,903	0	1,939	0
ALKALOID ...	2,105	0	2,141	0
HYDROCHLORIDE ...	1,930	0	1,965	0

PENTOBARBITONE.—Less than 100-kilo lots are 85s. 6d. per kilo for **ACID** and 90s. 6d. for **SODIUM**.

PETHIDINE HYDROCHLORIDE.—Subject to D.D.A. Regulations, 5-kilo lots, 300s. per kilo.

PHENACETIN.—B.P. 1-ton lots, 6s. 3d. per lb.; 1-cwt., 6s. 9d.

PHENAZONE.—1-cwt. lots, 9s. 6d. per lb.

PHENOBARBITONE.—Spot rates 50-kilo lots, 47s. 6d. per kilo. **SODIUM**, 54s. 6d.

PTHALYSULPHATHIAZOLE.—5-kilo lots, 32s. 6d. per kilo; 50-kilos, 31s. 6d. kilo.

PHENOLPHTHALEIN.—1-cwt., 9s. per lb.

PHOLCODINE.—8 oz. lots, 91s. 6d. per oz. (3,227s. per kilo).

SUCCINYL SULPHATHIAZOLE.—5-kilo lots, 38s. 6d. per kilo; 50-kilos, 37s. 6d. kilo.

SULPHACETAMIDE.—50-kilo lots, 54s. per kilo; **SODIUM**, 55s.

SULPHADIAZINE.—5-kilo lots, 45s. 6d. per kilo; 50-kilo lots, 40s.

SULPHADIMIDINE.—50-kilo lots are 29s. per kilo.

SULPHAGUANIDINE.—100-kilo lots, about 19s. 6d. per kilo.

SULPHAMERAZINE.—In 50-kilo lots 37s. 6d. per kilo.

SULPHAMETHIZOLE.—B.P. Under 50-kilos, 85s. per kilo.

Crude Drugs

ACONITE.—Spanish *napellus* short at 3s. 6d. per lb.; shipment, 3s. 3d. c.i.f.

ANISE.—Chinese STAR, 145s. per cwt. spot, duty paid, f.a.q. for shipment, 117s. 6d., c.i.f.

ANNATTO.—Madras, f.a.q. seed, spot, quoted at 195s. per cwt.

ASAFOETIDA.—Persian quoted at £19 cwt.

BALSAMS.—(per lb.): **CANADA**, 37s. **COPAIBA**, B.P.C. spot, 11s. 6d.; shipment, 6s. 6d., c.i.f.; **PERU**, spot, 14s.; shipment, 13s., c.i.f.; **TOLU**, B.P. 12s. 6d.

CINNAMON.—BARK, Seychelles, 157s. 6d. cwt. spot; shipment, 137s. 6d., c.i.f.; **Ceylon QUILLS** for shipment, five 0's, 10s. 8d., two 0's, 9s. 6d., seconds, 8s., quillings, 5s. lb., all c.i.f.

COCHINEAL.—(Per lb.) Canary Isles silver-grey, 16s. 9d. spot; black bright, 19s. 6d.; Peruvian silver-grey, 12s. 9d. (12s. 3d., c.i.f.).

COCILLANA.—Bark from 2s. 10d. to 3s. per lb., on the spot; shipment, 2s. 6d. to 2s. 10d., c.i.f.

COLOCYNTH PULP.—Spot, 3s. 10d. per lb.; shipment, 3s. 9d.

GINGER.—(Per cwt.) Nigerian split, 70s. spot, shipment, 80s., c.i.f.; peeled, spot, 145s., shipment, 132s. 6d., c.i.f. African spot 155s. Jamaican No. 3 spot, 255s., shipment, 245s., c.i.f.; **Cochin**, spot, 190s.; shipment, 175s., c.i.f.

GUM ACACIA.—Kordofan cleaned sorts 250s. per cwt., spot; shipment, 232s., c.i.f.

HONEY.—(per cwt., ex store). Australian light amber, 135s. to 140s.; and medium amber, 115s. to 120s. Argentine, 105s. to 110s.; Canadian, 172s. 6d. to 175s.; Mexican, 115s. to 120s.; Chinese, 85s. to 100s.

IPECACUANHA.—Matto Grosso for shipment, 40-41s. per lb., c.i.f., spot, 49s. Costa Rican, 60s., spot; forward 57s. 6d., c.i.f., Colombian, spot, 49s. nominal, shipment, 44s., c.i.f.

KARAYA.—No. 1 f.a.q. gum, spot, 300s.; No. 2, 200s. per cwt.

KOLA NUTS.—West African halves are 7½d. per lb. on the spot; shipment, 7d., c.i.f.

NUTMEGS.—(Per lb.) West Indian, spot, 80's, 11s. 6d.; shipment, 8s. 9d., c.i.f.; East Indian for shipment, b.w.p., 3s. 7d.; 110's 6s. 6d.; 80's, 7s. 6d., all c.i.f.

PEPPER.—White Sarawak, 3s. 2d. per lb. spot; shipment, 3s., c.i.f. Black Sarawak, 2s. 8d. spot nominal; shipment, 2s. 3½d., c.i.f. Black Malabar, 305s. per cwt. c.i.f. Brazilian black No. 1, 2s. 8½d. lb. duty paid.

PODOPHYLLUM.—*Emodi* 185s., per cwt. spot; shipment, 160s., c.i.f.

SEEDS.—(Per cwt.) **ANISE**.—Cyprian, 250s., spot. **CARAWAY**.—Dutch, 155s., spot. **CELERY**.—Indian, 160s., spot; shipment, 145s., new crop (July-August) 160s., c.i.f. **CORIANDER**.—Moroccan spot, 140s., Rumanian splits, 120s., both duty paid; shipment Moroccan new crop for June-July, 86s., c.i.f. **CUMIN**.—Spot Cyprian, 250s.; Indian, 250s.; Iranian, 235s., duty paid; shipment (c.i.f.) Indian, 230s.; Iranian, 165s. (c.i.f.). **DILL**.—Indian, 112s. 6d., spot; shipment, 92s. 6d., c.i.f. **FENNEL**.—Chinese, 130s., duty paid; Indian, 155s.; shipment, Chinese, 90s.; Indian, 132s. 6d., c.i.f. **FENUGREEK**.—Moroccan, 80s., duty paid, new crop, July-August, 62s. 6d., c.i.f. **MUSTARD**.—English, 65s. to 100s., according to quality.

SENNA.—(Per lb.) Tinnevelly LEAVES, spot; Prime No. 1, 2s. 3d.; No. 3, f.a.q., 1s. 3d. Shipment; No. 3, 1s. 1d., c.i.f. **PODS** Tinnevelly hand-picked, 2s. 9d.; manufacturing, 1s. 3d., shipment, 1s. 2d., c.i.f. Alexandria **PODS**: Hand-picked spot, 5s. to 7s. with substandard material at lower levels; manufacturing, forward, 2s. 1d., c.i.f.; spot, 2s. 6d.

Essential and Expressed Oils

CAMPHOR, WHITE.—Chinese for shipment, 4s. 2d., c.i.f., per kilo; spot, 2s. 5d. lb., duty paid.

CANANGA.—Spot from 32s. 6d. per lb.

CINNAMON.—English-distilled, 75s. per oz.; other B.P. oils from 22s. to 130s. per lb. Ceylon leaf, 23s.; Seychelles leaf rectified from 9s. 9d., spot.

CITRONELLA.—Ceylon, spot, 4s. per lb.; shipment, 3s. 9d., c.i.f.; Formosan, 4s. 6d. in bond and 4s. 9d., c.i.f.; Chinese, 3s. 9d. in bond; 3s. 7d., c.i.f.

DILL.—Imported from 36s. per lb., spot.

EUCALYPTUS.—Chinese, 80-85 per cent., 8s. 9d. per kilo in bond; shipment, 8s. 3d., c.i.f.

FENNEL.—Spanish sweet, 16s. per lb., duty paid.

ORANGE.—Floridan sweet, 5s. per lb.; Spanish from 19s. 6d.; Sicilian bitter, 65s.

PEPPERMINT.—(Per lb.) *Arvensis*: Chinese for shipment, 9s., c.i.f.; spot, 9s. 3d. Brazilian for shipment, 7s. 10½d., c.i.f.; spot, 8s. 3d. *Piperita*: Italian spot, 95s.

PETITGRAIN.—Paraguay for shipment, 14s. 9d., c.i.f.; spot, 15s. 3d. per lb.

PIMENTO.—Imported BERRY, 110s.; English distilled, 390s.; LEAF, 24s. per lb.

PINE.—*Pumilionis*, 20s. per lb., *sylvestris*, 8s.; *abietis*, 14s.

THYME.—Red, 27s. 6d. per lb., for 45-50 per cent., duty paid.

UNITED STATES REPORT

NEW YORK, MAY 16: **GLYCERIN** for spot delivery was reportedly bringing substantial premiums over list or contract prices. Price tone in such items as **MENTHOL** and **SULPHA** was said to be easy but no actual changes in quotations were made. Among **CRUDE DRUGS** **LYCOPodium** rose 50 cents to 25¢ per lb. on small available stocks. **JALAP ROOT** advanced 10 cents to 85 cents with powdered now 95 cents per lb. **PERU BALSAM** gained 25 cents to 2.35\$ per lb., and **ALTHEA ROOT**, cut type, was boosted 10 cents to 70 cents. Also higher is powdered **GENTIAN** at 48 cents a lb., up three cents. **ESSENTIAL OILS** were unchanged in price but inactive.

TRADE MARKS

APPLICATIONS ADVERTISED BEFORE REGISTRATION

"Trade Marks Journal," May 10, No. 4628

For chemical substances used in photography (1)

CHROMAGRAPH, B574.370 by Dr.-Ing Rudolph Heil, Kiel, 2300, Germany.

For hair creams, brilliontines, toilet soaps, shampoos, toilet waters, perfumes, hair lacquers and non-medicated hand creams, all being rose-perfumed (3)

MARGO'S ROSE DROPS, 890.620, by Sidney Margolis, Ltd., London, S.E.17.

For non-medicated skin lightening cream, medicated oniseptic soap, eye shadow preparations and talcum powder for toilet use (3)

DOROT, B593.306, by Henri Dorot, London, S.W.9.

For non-medicated toilet preparations and cosmetic preparations (3)

WINKIN, BLINKIN AND NOD, 897.397, by Avon Cosmetics, Ltd., Northampton.

For non-medicated toilet and cosmetic preparations for application to the skin (3)

COTY SKIN VELVET, 897.849, by Coty (England), Ltd., London, W.1.

For denurifices containing fluorine (3) and for pharmaceutical products containing fluorine to be used by dentists (5)

ACTIFLUOR 3-18, 893.823-24, by Dr. Wild & Co. Basle, Switzerland.

For medicated preparations for the treatment of the skin and scalp; deodorants for personal use; medicated bath preparations; styptics; sterilising preparations for toilet articles and for implements, appliances and for machines used in manicure, chiropody and in hair dressing; analgesics for human use; smelling salts; and medical and surgical dressings for human use (5)

L'OREAL, 814.116, by L'Oreal, Paris, France.

For pharmaceutical and veterinary preparations and substances, all for use in connection with human and animal secretions, extracts and cell material to be subjected to gelation (5)

TWYGEL, 890.451, by Twyford Laboratories, Ltd., London, N.W.10.

For pharmaceutical and veterinary preparations and substances (5)

QUICKOV-ER, B892.424, by Tri-Ken Corporation, Washington, U.S.A.

For pharmaceutical and veterinary preparations and substances; infants' and invalids' foods; medical and surgical plasters; and material prepared for bonding (5)

MAUCHANT, B892.566, Société Parisienne de Recherches et d'Expansion Thérapeutique, Gennevilliers (Seine), France.

For pharmaceutical preparations and substances (5)

BRODINA, FENETONA, 892.727-28, by Sterwin, A.G., Zug, Switzerland.

For pharmaceutical preparations and substances, all for use as sedatives, tranquillisers, analgesics or hypnotics (5)

MYCALM, B892.729, by Sterwin, A.G., Zug, Switzerland.

For pharmaceutical preparations (5)

FERMOGNOST, 892.897, by Veb Arzneimittelwerk Dresden, Radebeul, 1, Germany.

For medicinal and pharmaceutical preparations and substances for human and veterinary use, oil containing or consisting of organic compounds which contain one or more ketone groups (5)

KETOSCILIUM, 892.981, by Zambon S.p.A., Milan, Italy.

For pesticides (5)

DU-FUNG, 893.414, by N. V. Philips-Duphar, Amsterdam, Holland.

For veterinary preparations; and chemical preparations for use as nutritional additives to animal foodstuffs (5)

CYFAC, 894.024, by American Cyanamid Co. Wayne, New Jersey, U.S.A.

For pharmaceutical tonic preparations in tablet form (5)

Device with words J. W. TAYLOR'S SUPER TONIC TABLETS, 896.460, by Taylors Herbs and Wholefoods, Norwich, Norfolk.

For antibiotics and antibiotic preparations, all for pharmaceutical and veterinary use (5)

MYCOCHLORCETIN, 894.522, by Willows Francis, Ltd., London, E.8, and Epsom, Surrey.

For pharmaceutical substances (5)

PROTHAZIN, 894.978, by Veb Arzneimittelwerk Dresden, Radebeul, 1, Germany.

For optical apparatus and instruments, etc.; and parts and fittings (9)

SAPHIRA, 893.395, by Saphira Internationale Brillenmode, G.m.b.H. & Co., K.G., München, 23, Germany.

PATENTS

COMPLETE SPECIFICATIONS ACCEPTED From the "Official Journal Patents," May 10

Nitrofurantoin derivatives. Imperial Chemical Industries, Ltd. 1,072,579.

Pharmaceutical compositions comprising monoglyceryl ether derivatives. Astra, A.B. 1,072,659.

Diocyl phloroglucinol derivatives. Smith Kline & French Laboratories, Ltd. 1,072,673.

2-pyrroline derivatives. Ravizza, S.A. 1,072,710.

Process for the production of laurin lactam. Inventa A.G. Forschung und Patentverwertung. 1,072,714.

Method for the preparation of tertiary ether glycols and compounds produced thereby. Ortho Pharmaceutical Corporation. 1,072,725.

Citrus fruit derivatives. Grindstedvaerket, A/S. 1,072,733.

Chemotherapeutic compositions containing substituted benzimidazoles. Smith Kline & French Laboratories, Ltd. 1,072,735.

Respiratory masks. Airmed, Ltd. 1,072,741.

Process for producing sulphonated cation exchanges. Farbenfabriken Bayer, A.G. 1,072,749.

Pharmaceutical compositions comprising uricosuric agents and 3 indolyl oliphatic acid derivatives. Merck & Co., Inc. 1,072,771.

17-ethers of estradiol and their 3-acylates. Francesco Vismara, S.p.A. 1,072,828.

Antibiotic funginon and a process for the production thereof. Taisho Pharmaceutical Co., Ltd. 1,072,881.

Process for the manufacture of 19-nor-steroids. CIBA, Ltd. 1,072,938.

Yeast product. H. Griffon and G. Tixier. 1,073,030.

Purine derivatives. Yissum Research Development Co. 1,073,039-40.

Method of producing tetracycline. Spofa, Sdzuzeni Podniku pro Zdravotnickou Vyrobu. 1,073,047.

Shaver and method of shaving. Shavair International, Inc. 1,073,070.

Artificial heart valve. National Research Development Corporation. 1,073,076.

Intra-uterine contraceptive device. B. P. Appleby. 1,073,114.

Double seal linerless cap for containers. Gibson Associates, Inc. 1,073,124.

Test packs for the detection of uric acid. Miles Laboratories, Inc. 1,073,172.

Bird repellent for the treatment of ortices and structures. Bugges Insecticides, Ltd. 1,073,210.

Tetracycline derivatives. E. Merck, A.G. 1,073,213.

Bottle closures. Permuta Closures, Ltd. 1,073,225.

Anion exchange resins. Diamond Alkali Co. 1,073,249.

Process for producing nicotinamide dinucleotide. Kyowa Hakko Kogyo Co. Ltd. 1,073,287.

Manufacture of barbituric acid derivatives. Aspro-Nicholas, Ltd. 1,073,299.

Therapeutic placenta preparations. I. W. Graniter. 1,073,302.

18-nor-steroids. Biorex Laboratories, Ltd. 1,073,309.

Methods of producing corticotrophin polymers. Ferring, A.B. 1,073,334.

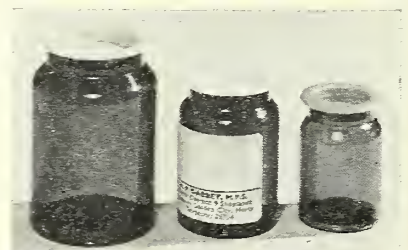
British patent specifications relating to the above will be obtainable (price 4s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from June 21.

PACKAGING NOTES

Packaging Materials Exhibited.—A display of the packaging products of the member companies of the Reed Paper Group, Ltd., is being held at Reed House, 82 Piccadilly, London, W.1, until June 2. The materials shown include boxes, cartons, sacks, films and plastic extruded mesh. Emphasis is on the technological and scientific support available to customers from members of the group.

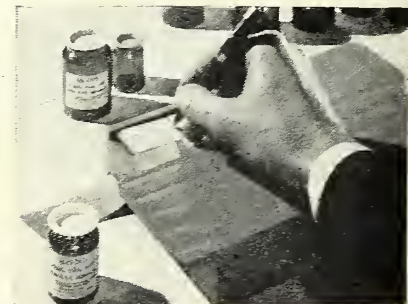
American Packages in London.—Twenty-five American manufacturers of packaging machinery and materials are showing examples of their products at the United States Trade Center 57 St. James's Street, London, S.W.1, until May 26. Among the exhibits are filling machinery for liquids, creams and pastes, container-coding equipment, a new check-weighing cell, labellers, containers, sealing tapes and "dispensers" and a new heavy-duty corrugated-paper packing-case material. A number of the exhibitors are seeking United Kingdom agents.

Dispensing Containers and Labelling Aid.—Produced in transparent amber polystyrene and fitted with airtight low-density polythene closures, a new range of plastic containers by Holpak Ltd.,



Holpak range of dispensary vials (2-, 1- and ½ fl. oz.)

Bessemer Road, Welwyn Garden City, Herts, has been developed after research into the requirements of the retail chemist and of hospital pharmacy. Three basic sizes (nominal ½, 1 and 2-fl. oz. capacity) are available at an average cost below the National Health Service container allowance. A wide-mouthed, shouldered pot was found to be the ideal shape, and a simple plug-type closure to be both quick to apply and effective for sealing. The process allowed the walls to be parallel — a distinct advantage for labelling as compared with old-type containers produced by injection moulding, which had tapered sides. In developing the containers, Messrs. Holpak discovered that no label "dispenser" suited to the



Holpak label dispenser in use.

needs of the pharmacist and modest in cost was on the market. They therefore developed a model. It accommodates a reel of 1,000 self-adhesive labels, which are fed through a writing window, each new label being automatically presented in position as the last is removed. Even left-handed writers have been catered for. The label desk may be screwed to the bench if required. It is in ABS with high-impact styrene base and costs 16s. 6d.

PRINT AND PUBLICITY

PRESS ADVERTISING

BRITISH COD LIVER OILS (HULL AND GRIMSBY), LTD., Marfleet, Hull, Yorks: Five information booklets on the use of cod liver oil in livestock feeding (dealing with poultry, horses and ponies, sheep, pigs and cattle).

DIXON, LTD., St. Leonard's Road, Mortlake, London, S.W.14: Velvety powder cream. In women's magazines.

THOS. GUEST & CO., LTD., 92 Carruthers Street, Ancoats, Manchester, 4: Sure Shield laxatives. In *Woman*, *Woman and Home*, *My Home and Family*, *Woman's Own*, *Woman's Realm* and *Woman's Weekly*.

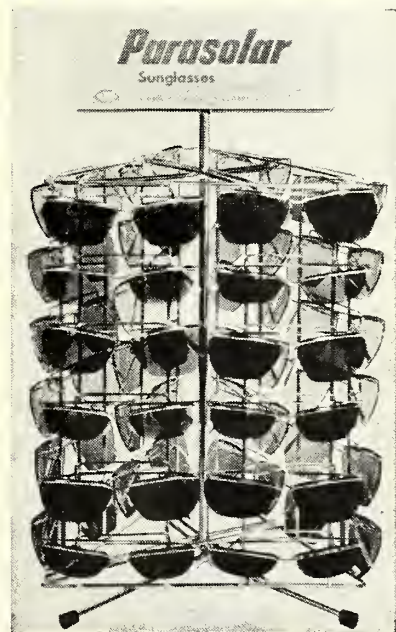
DISPLAYING THE RANGE:

To encourage sales of their disposable nappies in larger outlets, **Robinson & Sons, Ltd.**, Wheat Bridge Mills, Chesterfield, Derbys, are providing a "dispenser" as illustrated at right on which all their products may be conveniently and attractively displayed using little floor space.



SALES AIDS FOR SUNGLASSES

LEFT: A wire-frame stand for the Correna sunglasses of A. Corre & Son, Ltd., 30 Station Parade, London, N.W.2. **RIGHT:** A display stand for the sunglasses of Combined Optical Industries, Ltd., 198 Bath Road, Slough, Bucks.



REVERSIBLE "DISPENSER": New Quickies skin cream with moisturiser in small and large packs shown in "dispenser" pack for counter. The "dispenser" has the unusual feature of being reversible, so either side may be shown to the customer. Distributors are Fasset & Johnson, Ltd., 96 De Beauvoir Road, London, N.1.

PHILLIPS SCOTT & TURNER CO., 2 St. Mark's Hill, Surbiton, Surrey: Delrosa child health booklet No. 4: "Guide to perfect teeth" (pp. 8) for free distribution to customers (available May to June).



FOR THE SEASON'S CAMPAIGN: Window and counter display material and packages to be used by CIBA Laboratories, Ltd., in promoting Entero-Vioform during the coming summer. Bonus terms are being offered to chemists, and there is a draw open to those making use of the display material.

COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of week of insertion.

Monday, May 22

INTERNATIONAL INSTRUMENT SHOW, Grosvenor House hotel, Park Lane, London, W.1. Until May 26.

INTERNATIONAL PACKAGING EXHIBITION, (Pakex '67) Earls Court, London, S.W.5. Until May 26.

ROMFORD BRANCH, PHARMACEUTICAL SOCIETY, Plough Inn, Gallows Corner, Romford, at 7.45 p.m. Dr. A. H. Griffith (medical adviser on biological preparations, Wellcome Foundation) on "Recent Advances in Immunisation and Vaccines."

SOCIETY OF COSMETIC CHEMISTS, Washington hotel, Curzon Street, London, W.1, at 7 p.m. Annual meeting.

Tuesday, May 23

SALISBURY BRANCH, NATIONAL PHARMACEUTICAL UNION, Old House restaurant, 47 New Street, Salisbury, at 7.45 p.m. Mr. M. Taylor (immediate past chairman, Bournemouth Branch, Pharmaceutical Society) on the recent "Medicines with Care" campaign in Bournemouth.

Wednesday, May 24

BOURNEMOUTH PHARMACEUTICAL SOCIETY, Medical centre, Boscombe, at 1.20 p.m. Dr. M. M. Parry, on "The Demand for Medical Care."

MANCHESTER PHARMACEUTICAL GOLFING SOCIETY, Heaton Moor golf club, Heaton Moor. Single-ball Stapleford competition for Nicholas Products prize.

Thursday, May 25

SUNDERLAND BRANCH, NATIONAL PHARMACEUTICAL UNION, Roker hotel, Sunderland, at 7.45 p.m. Annual meeting.

THAMES VALLEY PHARMACISTS' ASSOCIATION, Winthrop House, Surbiton, Surrey, at 7.45 p.m. Mr. J. P. Hall, on "Home Wine Making."

Advance Information

GUILD OF PUBLIC PHARMACISTS, Derbyshire Royal Infirmary, Derby, at 3.30 p.m. on June 10. Joint meeting of three Midland branches. Professor A. H. Beckett (head of Chelsea School of Pharmacy) on "The Place of Pharmacists in Hospital Practice". All hospital pharmacists and post graduate students are invited.

NATIONAL PHARMACEUTICAL UNION GROUP OF ORGANISATIONS, 17 Bloomsbury Square, London, W.C.1, on June 27. Annual meetings. At 7 p.m. N.P.U. Holdings, Ltd. (shareholders only); 7.30 p.m. Chemists' Sickness and Provident Society; 7.40 p.m. Chemists' Mutual Insurance Co., Ltd.; 7.50 p.m. Chemists' Defence Association, Ltd.; 8 p.m. National Pharmaceutical Union.

Prescribers' Press

What doctors are reading about developments in drugs and treatments

NO evidence that oral contraceptives are responsible for producing or precipitating cerebral arterial occlusion has been found by workers at the University of Glasgow institute of neurological sciences during full investigations of over 500 carotid strokes between 1956 and 1965. Their report follows that of the Medical Research Council's statistical research unit, which indicated, on a small number of patients, a possible link between oral contraceptives and cerebral thrombosis (see C. & D. May 13, p. 458). In the present study, 146 patients were aged fifteen to forty-five and sixty-five of them were women. The authors found that pregnant women in that age group had a considerably higher mortality than either men or non-pregnant women with strokes. Of the forty-two non-pregnant women in the survey, forty had not been taking oral contraceptives. No increase in the number of cases in the fifteen to forty-five age group was found to have occurred following the introduction of oral contraceptives and there was no obvious difference between strokes reported in association with contraceptives and those occurring in other women in the same age group. (*Lancet*, May 13, p. 1019.)

REVIEWING literature in gentamicin, *Drug and Therapeutics Bulletin* says that the drug may be considered in severe infections caused by *Pseudomonas aeruginosa* and by susceptible organisms resistant to other and less toxic drugs. Renal function should always be assessed before it is prescribed and vestibular and auditory function

must be inquired about daily and tested every few days. (D. & T. B. May 12.)

NEW COMPANIES

P.C. = Private Company. R.O. = Registered Office.

COLEMAN-BAYLIS (WHOLESALE), LTD., (P.C.). Capital £100. To carry on the business of importers, exporters, wholesalers, retailers of toilet goods, chemists' sundries, cosmetics, soaps, etc. Directors: David J. Coleman and John A. Baylis. R.O.: 73 Balham Park Road, London, S.W.12.

D. J. PATERSON (KIDBROOKE), LTD. (P.C.).—Capital £1,000. To carry on the business of manufacturing and retail chemists and druggists, etc. Directors: David J. Paterson, M.P.S., Ellen E. Paterson and David S. Sim. R.O.: 71 Mycenae Road, London, S.E.3.

FREDERICK ALLEN & SONS (EXPORT), LTD. (P.C.).—Capital £1,000. To carry on the business of manufacturers and exporters of and dealers in chemicals, acids, alkalis, fats, etc. Directors: Ernest E. Unwin, John Unwin, Bernard J. Mahoney (all directors), Frederick Allen & Sons, (Chemicals), Ltd.). R.O.: Phoenix Chemical Works, Upper North Street, London, E.14.

GROSSMITH NATURAL BEAUTY PRODUCTS, LTD. (P.C.). Capital £100. To carry on the business of dealers in perfumery and toilet preparations, etc. Stanley H. Davis and David Ordish. R.O.: 44 Piccadilly, London, W.1.

JOHN GROSSMITH (MEN'S TOILETRIES), LTD. (P.C.). Capital £100. Directors: Sidney L. Stocks and Moyra A. Grossmith. R.O.: 41 Piccadilly, London, W.1.

K.P.K. CHEMICALS, LTD. (P.C.). Capital £100. Subscribers: Patricia Ewing and Jacqueline M. Walker, 59 Gresham Street, London, E.C.2.

PARFAIT (COSMETICS), LTD. (P.C.).—Capital £100. Directors: Walter Gunningham and Doris Marsden. R.O.: 59 Buttermere Road, Ashton-under-Lyne, Lancs.

PHILLIP PARRINDER, LTD. (P.C.). Capital £100. To deal in sponges, etc. Directors: Philip G. Parrinder and Turid Parrinder. R.O.: 109 High Street, Bromley, Kent.

REDTAR CHEMICAL CO., LTD. (P.C.).—Capital £1,000. To carry on the business of merchants of and dealers in chemicals, drugs, medicines, etc. Directors: Elizabeth Tarrant and Robert J. Redman. R.O.: 15a Greek Street, Stockport, Ches.

SELIGMAN & LATZ, INC. — Capital \$3 million. Registered in State of Delaware, U.S.A., to operate beauty salons, and to manufacture and deal in cosmetics, soaps, face powders, etc. British Address: 6 Curzon Place, London, W.1. Directors: Edwin K. Latz, John S. Kubie, and Malcolm A. Seligman, and four others all resident in New York.

PHINOPAD LTD. (P.C.). — Capital £100. To carry on the business of wholesale and retail chemists and druggists, etc. Subscribers: Leonard H. Lewis and Francis A. Dean. R.O.: 6 Surrey Street, London, W.C.2.

CONTEMPORARY THEMES

Subjects of contributions in current medical and technical publications

TESTING EMULSIONS. Recent processes employed in. *Dragoco Report*, April, p. 69.

INFLUENCE of pregnancy and oral contraception on the incidence of strokes in women of childbearing age. *Lancet*, May 13, p. 1029.

RETINOL (vitamin-A alcohol). The effect of, on urinary excretion of mucopolysaccharides in the hurler syndrome. *Lancet*, May 13, p. 1029.

INTENSIVE THERAPY. Some practical aspects of. *Lancet*, May 13, p. 1045.

CADMIUM CHLORIDE. Sterilisation of scrub cows with. *Vet. Rec.*, May 13, p. 569.

A CHEMICAL to combat cancer [Retine]. *New Scientist*, May 11, p. 324.

WILLIAM OSLER and medical journalism. *J. Amer. med. J.*, May 1, p. 386.

PROGESTERONE: its possible rôle in the biosynthesis of cardenolides in *Digitalis lanata*. *Science*, April 28, p. 519.

DISINFECTION by electrohydraulic treatment. *Science*, April 28, p. 524.

NEW PRODUCTS PARADE 1966. *Drug Intelligence*, March, p. 94.

INTRAVENOUS IDOXURIDINE. Herpes simplex encephalitis treated with. *Brit. med. J.*, May 13, p. 407.

CLOXACILLIN in treatment of acute osteomyelitis. *Brit. med. J.*, May 13, p. 414.

IDOXURIDINE. Herpes simplex virus encephalitis treated with. *Brit. med. J.*, May 13, p. 419.

ANTIDOTES in anticholinesterase poisoning. *Nature*, May 13, p. 706.

CESTICIDAL action of diphenyl sulphone 4:4'-di-isothio-cyanate. *Nature*, May 13, p. 708.

PANCREOZYMIN PREPARATION. Effect on gastric secretion. *Nature*, May 13, p. 729.

ANTI-CHOLINERGIC DRUGS. *Canad. pharm. J.*, March, p. 18.

COMMERCIAL TELEVISION

The information given in the table is of number of appearances and total screen time in seconds. Thus 7/105 means that the advertiser's announcement will, during the week covered, be screened seven times and for a total of 105 seconds.

Period—May 28-June 3

PRODUCT	London	Midland	North	Scotland	Wales & West	South	North-east	Anglia	Ulster	Westward	Border	Grampian	Eireann	Channel Is.
Alka-Seltzer ...	3/135	3/135	3/135	3/135	3/135	3/135	3/135	3/135	3/135	3/135	3/135	3/135	3/135	3/135
Anadin ...	1/30	3/67	1/30	3/90	2/60	3/90	2/60	1/30	2/60	3/90	2/60	2/60	—	2/60
Andrews liver salts ...	2/30	2/30	1/15	2/30	3/90	2/30	3/45	1/15	2/30	1/30	—	2/30	3/35	3/45
Anne French ...	3/90	1/30	—	—	1/30	—	—	—	1/5	—	—	—	—	—
Askit powders and tablets ...	—	—	—	7/49	—	—	—	—	—	—	3/21	2/14	—	—
Bisodol ...	—	—	—	—	—	1/7	—	—	—	—	—	—	—	—
Dentu-Creme ...	2/60	—	—	2/30	2/30	2/60	2/30	2/60	3/45	2/30	2/30	3/45	—	4/60
Dettol ...	—	1/45	1/45	—	2/90	—	1/45	1/45	—	1/45	—	—	—	1/45
Euthymol tooth paste ...	—	—	—	—	—	—	—	—	—	—	—	—	1/30	—
Haze ...	—	1/15	—	—	—	—	—	—	—	—	—	—	—	—
Immac ...	1/30	1/30	2/60	1/30	—	—	—	1/30	1/30	—	—	—	—	1/30
Milk of Magnesia ...	—	—	—	—	—	—	—	—	—	—	—	—	1/15	—
Nair ...	—	—	—	—	—	—	—	—	—	—	—	—	2/30	—
Parador floral disinfectant ...	—	4/44	4/52	—	—	—	—	—	—	—	—	—	—	—
Polaroid cameras ...	—	1/30	1/30	—	—	1/30	—	—	—	1/30	—	—	—	4/120
sun-glasses ...	—	1/30	—	—	1/30	1/30	—	—	—	—	—	—	—	—
Powerin ...	—	1/7	—	—	—	—	—	—	—	—	—	—	—	—
QT suntan lotion ...	1/30	1/30	1/30	—	—	—	—	—	—	—	—	—	—	—
Scholl exercise sandals ...	2/60	2/60	3/90	3/90	3/90	2/60	3/90	2/60	2/60	3/90	3/90	3/90	—	3/90
Score hairdressing ...	1/60	3/180	2/60	2/60	3/180	3/180	2/60	3/180	3/180	3/180	3/180	3/180	—	3/180
Simpkin's JuiCees ...	—	4/120	—	—	—	—	—	—	—	—	—	—	—	—
Steradent ...	—	—	—	—	1/30	2/60	3/90	2/60	1/30	1/30	2/60	1/30	—	2/60
Wright's coal tar soap ...	1/15	1/15	1/15	2/30	2/30	—	1/15	1/15	—	1/15	1/15	1/15	—	—

May 20, 1967

simulative price changes

AMENDING C & D
QUARTERLY PRICE LIST
FOR MARCH 1967

coeline (49 AF) ampoules 0.1 gm 8 64 0 — 7 2	Appetrol (1441 Wallace) ts4B tablets 100 19 1ea — 28 8	small assorted carton 12 9 — 1 6
tal (97 Bayer) tablets 48 44 0 — 5 6 250 15 0ea — 22 6 1000 47 8ea — 71 6	Aqua Net (1587 RFL) deodorant aerosol 6oz 36 3 9 6 4 11 shampoo bottles 14 0 3 7 1 11	medium assorted tin 21 3 — 2 6 large assorted tin 29 9 — 3 6 medium strips tin 21 3 — 2 6 large strips tin 29 9 — 3 6 3in x 1/2in 100 91 0 — 11 4 1/2 3in x 1in 100 112 0 — 14 0 1/2in dia. 100 78 0 — 9 9 1 1/2in x 1 1/2in 100 106 0 — 13 3 2in x 4 1/2in 5 21 3 — 2 6 50 224 0 — 28 0
thar (61 APC) ts4B intravenous 45iu 84 0 — —	Armyl (61 APC) injection vial — — — —	butterfly closure 100 72 0 — 9 0
trilawn (818 M & B) weed killer 4oz 44 0 — 5 6 8oz 84 0 — 10 6	Astral (333 Cupal) existing entry Astral (333 Cupal) air fresheners bouquet blocks 11 1 — 1 3 cedar blocks 22 0 — 2 6 junior blocks 6 11 — 9 rainbow blocks 18 10 — 2 0	D Bandit (Piguet (1253 Turnpenny) existing entry) I Bandit (Piguet (1446 Pearmoss)) perfume 1/2oz 15 0ea 4 2ea 26 8 1/2oz 34 4ea 9 5ea 61 0 1/2oz 57 9ea 15 8ea 102 6 1oz 88 0ea 24 1ea 174 0 2oz 151 9ea 41 10ea 269 6 4oz 267 0ea 73 5ea 474 0 toilet water 2oz 18 6ea 5 0ea 32 0 4oz 28 0ea 7 9ea 49 0 8oz 44 0ea 11 7ea 79 0 16oz 72 6ea 20 1ea 129 0 32oz 106 0ea 29 2ea 188 0
tron (843 ML) tablets 10 18 8 5 1 2 6 20 33 8 9 1 4 6	Astron (333 Cupal) air freshener aerosols Apple Blossom super size 37 4 — 3 11 Caribbean Night popular size 32 5 — 3 3 Magnolia Blossom household size 29 2 — 2 11 super size 37 4 — 3 11 Rose Petal household size 29 2 — 2 11 super size 37 4 — 3 11 Touch of Spring super size 37 4 — 3 11 bubble pacblocks apple blossom, carnation, lavender mothrepellent, magnolia blossom, rose pearl, toilet car air freshener 13 10 1 6 16 0 1 9	Banistyl (971 PSMB) ts4B tablets 20mgm 50 11 0ea — 16 6
cortyl-A (1176 Squibb) intramuscular (vet.) 100gm & 1gm ophthalmic ointment with graneodin	Atkinson (76 Atkinson) English lavender 2oz 71 3 19 1 10 6 4oz 132 4 35 6 19 6 7oz 203 6 54 7 30 0 14oz 390 0 104 7 57 6 28oz 746 0 200 0 110 0	D Barquinol (1530 Fisons) Belmag (713 KH) ideal quartz lamp 511.136 442 6ea — 590 0
Pilo (930 P & B) ts1 ophthalmic solution 1% 10mils 5 6ea — 8 3 2% 10mils 6 3ea — 9 5 4% 10mils 7 9ea — 11 8	Atkinson (76 Atkinson) English lavender 2oz 71 3 19 1 10 6 4oz 132 4 35 6 19 6 7oz 203 6 54 7 30 0 14oz 390 0 104 7 57 6 28oz 746 0 200 0 110 0	D Bena-Fedrin (938 PD) spray Benoxyl (1191 Stiefel) lotion plain 30mils 60 0 16 6 8 11 regular 30mils 62 0 17 0 9 2 strong 30mils 66 0 18 2 9 9
naline (1086 Rouse) naline (623 HP)† compound cream 50gm 43 0 11 6 6 4 100gm 62 0 16 7 9 2	Atrix (1164 SSL) hand care 4oz 48 0 12 11	Betnesol (518 Glaxo) tablets 0.5mgm 500 — — —
renoxyl (623 HP) ampoules 6 28 0ea 7 6ea 49 6	Avrogl (1281 Vincent) (distributors 1054 R & A) gel tube 31 4 8 7 4 6	D Bio (1400 PBI) flowerlife 2oz 1 8ea — 2 6
oyd (938 PD) tablets 30 32 2ea — —	Bacte-Phages (49 AF) ampoules coli-phage 5mils 143 0 — 15 11 intesti-phage 5mils 143 0 39 4 19 3 4mils 143 0 39 4 19 3	I Blue Velvet (1164 SSL) hand lotion 264 12 7 3 5 1 10 1/2 265 20 0 5 5 2 11 1/2
amycin GU (1263 Upjohn) ts4B tablets 30 32 2ea — — 100 104 6ea — —	Baghari (Piguet (1253 Turnpenny) existing entry) Baghari (Piguet (1446 Pearmoss)) perfume 1/2oz 12 9ea 3 7ea 22 10 1/2oz 30 3ea 8 5ea 54 0 1/2oz 43 2ea 11 11ea 76 6 1oz 61 11ea 17 1ea 110 0 2oz 104 2ea 28 8ea 184 6 4oz 190 9ea 50 0ea 336 0 2oz 18 6ea 5 0ea 32 0 4oz 28 0ea 7 9ea 49 0 8oz 44 0ea 11 7ea 79 0 16oz 72 6ea 20 1ea 129 0 32oz 106 0ea 29 2ea 188 0	D Bois d'Amour (286 Colomb) D Bonny Bouncer (436 Evans) see under Cindico
waire (97 Bayer) solution 500mils 13 3ea — —	Balmain (1052 Revlon) Jolie Madame or Vent Verc eau de toilette atomiser 112cc 494 0 135 10 75 0 perfume 4cc 181 3 49 10 27 6	I Bounce (481 F & S) hair set tube 35 2 9 3 5 6
re Solaire (525 Golden) beach tar remover 30gm 37 6 10 4 5 6	Monsieur Balmain eau de toilette atomiser 112cc 494 0 135 10 75 0	D Bourn-Vita (216 Cadbury) existing entry I Bourn-Vita (216 Cadbury) 1/2lb 15 10 1/2 — 1 8 1/2lb 28 6 — 3 0 1/2lb 54 8 — 5 9
Am-Ex (760 Liga) existing entry	Band-Aid (672 Johnson) existing entry Band-Aid (672 Johnson) elastic plasters wallets 8 6 — 1 0 medium assorted 21 3 — 2 6 1 1/2 x 1yd strip 21 3 — 2 6 2 1/2in x 1yd strip 29 6 — 3 6 2 1/2in x 6in strip 4 3 — 6 sheer plasters 21 3 — 2 6 washproof plasters wallets 8 6 — 1 0	D British bee venom (52 Antibody) all packs D British grass pollen (52 Antibody) D Bromodyne (745 Legat) Brown (859 Moore) pressurised complete 108 0 — 13 0 refill — — —
low protein biscuits 5oz 20 0 — 2 3	Band-Aid (672 Johnson) existing entry Band-Aid (672 Johnson) elastic plasters wallets 8 6 — 1 0 medium assorted 21 3 — 2 6 1 1/2 x 1yd strip 21 3 — 2 6 2 1/2in x 1yd strip 29 6 — 3 6 2 1/2in x 6in strip 4 3 — 6 sheer plasters 21 3 — 2 6 washproof plasters wallets 8 6 — 1 0	D Brut (1587 RFL) after shave balm 5414 — — 39 6 Fresh Up 5415 — — 39 6 primer 5416 — — 29 6 Replenish 5417 — — 39 6
bolex (769 LH) ts4B tablets 25mgm 30 18 0ea — 27 0 100 52 6ea — 78 9 250 120 0ea — —	Balmain (1052 Revlon) Jolie Madame or Vent Verc eau de toilette atomiser 112cc 494 0 135 10 75 0 perfume 4cc 181 3 49 10 27 6	Bunnies (761 Lilia-White) disposable nappies 10 17 5 — 1 10
old packs	Band-Aid (672 Johnson) existing entry Band-Aid (672 Johnson) elastic plasters wallets 8 6 — 1 0 medium assorted 21 3 — 2 6 1 1/2 x 1yd strip 21 3 — 2 6 2 1/2in x 1yd strip 29 6 — 3 6 2 1/2in x 6in strip 4 3 — 6 sheer plasters 21 3 — 2 6 washproof plasters wallets 8 6 — 1 0	Cadbury (216 Cadbury) diabetic chocolate plain 1/2lb 18 0 2 8 1 11 almond 1/2lb 21 10 3 3 2 4
flex (503 G) cream 20gm 48 0 13 2 1/2 7 2 500gm 90 0ea 24 9ea 159 9	Band-Aid (672 Johnson) existing entry Band-Aid (672 Johnson) elastic plasters wallets 8 6 — 1 0 medium assorted 21 3 — 2 6 1 1/2 x 1yd strip 21 3 — 2 6 2 1/2in x 1yd strip 29 6 — 3 6 2 1/2in x 6in strip 4 3 — 6 sheer plasters 21 3 — 2 6 washproof plasters wallets 8 6 — 1 0	D Cadum (280 CP) 5 pack minimum order soap continental toilet 18 10 5 2 1 2 (2doz) (2doz) 8 1 1 10 bath 29 7 8 1 1 10
paste 20gm 48 0 13 2 1/2 7 2	Band-Aid (672 Johnson) existing entry Band-Aid (672 Johnson) elastic plasters wallets 8 6 — 1 0 medium assorted 21 3 — 2 6 1 1/2 x 1yd strip 21 3 — 2 6 2 1/2in x 1yd strip 29 6 — 3 6 2 1/2in x 6in strip 4 3 — 6 sheer plasters 21 3 — 2 6 washproof plasters wallets 8 6 — 1 0	
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re Philippe (48 AP) bubble bath simple 2 13 0 3 7 1 11 cologne/lavender 24 19 6 5 4 2 11 ampou liquid 16 19 6 5 4 2 11 ch salts ecanter 8 60 0 16 6 8 11 bubble bath andlestick gold/silver 25 84 0 23 1 12 6 ocktail 30 84 0 23 1 12 6 mplexion milk 4 17 0 4 8 2 6 ir lacquer efill 12 11 9 3 3 1 9	Band-Aid (672 Johnson) existing entry Band-Aid (672 Johnson) elastic plasters wallets 8 6 — 1 0 medium assorted 21 3 — 2 6 1 1/2 x 1yd strip 21 3 — 2 6 2 1/2in x 1yd strip 29 6 — 3 6 2 1/2in x 6in strip 4 3 — 6 sheer plasters 21 3 — 2 6 washproof plasters wallets 8 6 — 1 0	
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n (394 DF)	Band-Aid (672 Johnson) existing entry Band-Aid (672 Johnson) elastic plasters wallets 8 6 — 1 0 medium assorted 21 3 — 2 6 1 1/2 x 1yd strip 21 3 — 2 6 2 1/2in x 1yd strip 29 6 — 3 6 2 1/2in x 6in strip 4 3 — 6 sheer plasters 21 3 — 2 6 washproof plasters wallets 8 6 — 1 0	
n (311 C)	Band-Aid (672 Johnson) existing entry Band-Aid (672 Johnson) elastic plasters wallets 8 6 — 1 0 medium assorted 21 3 — 2 6 1 1/2 x 1yd strip 21 3 — 2 6 2 1/2in x 1yd strip 29 6 — 3 6 2 1/2in x 6in strip 4 3 — 6 sheer plasters 21 3 — 2 6 washproof plasters wallets 8 6 — 1 0	
37 (52 Antibody)	Band-Aid (672 Johnson) existing entry Band-Aid (672 Johnson) elastic plasters wallets 8 6 — 1 0 medium assorted 21 3 — 2 6 1 1/2 x 1yd strip 21 3 — 2 6 2 1/2in x 1yd strip 29 6 — 3 6 2 1/2in x 6in strip 4 3 — 6 sheer plasters 21 3 — 2 6 washproof plasters wallets 8 6 — 1 0	

'Zyloric' brand Allopurinol

for the treatment of gout and other hyperuricaemic conditions



Burroughs Wellcome & Co. (The Wellcome Foundation Ltd.) London

	Cantil (824 MCP)	50	19	4ea	—	29	0			Crookes (324 Crookes)	50gm	24	0	6	7	3	7			inflammation	3oz	20	7	5	8	
	tablets	50	19	10ea	5	5½	35	2½	D	hand cream	114gm	48	0	13	3	7	1½			remedy	8oz	34	1	9	5	
	with phenobarbitone tsis4A	50	19	10ea	5	5½	35	2½	D	28gm									Deaner (1061 Riker)							
	Cara Nome (1053 Rexall)	48	0		13	2½	6	11	D	Cussons (338 Cussons)	existing entry								Declinax (1074 Roche)	10mgm	100	16	8ea			
	hair spray 383gm	48	0		13	2½	6	11	D	Cussons (338 Cussons)	after shave lotion	5040	17	0	4	5½	2	7		tablets	20mgm	100	24	0ea		
D	Carbellon (830 Medo)	500	pack						D		5041	30	6	7	11½	4	7					500	68	0ea		
D	Carbital (938 PD)	4oz and 8oz							D		5042	38	5	10	0½	5	9		Dee Gee (542 Griffin)			18	9	S	0	
D	Carters (235 Carteret)	little liver pills	36	18	0	S	0	2	5	Apple Blossom	toilet soap	2517	11	5	2	11½	1	6½	D	spare lamp						
D	Cellorene (1073 Robinson)	squares								talcum powder	4728	20	6	5	4½	3	1	D	Defi Delage (286 Colomb)							
D	Cerocol (276 C & C)									brilliantine liquid	5000	17	0	4	5½	2	7	D	Delage (286 Colomb)							
D	Check (1533 Check) existing entry										5001	23	10	6	2½	3	7	D	Dencyl (113 Bencard)							
D	Check (532 Goya)									solid	5007	11	10	3	1	1	10	D	Dentalone (938 PD)							
	deodorant									cold cream soap									Depo-Medrone (1263 Upjohn) TS	40mgm/mil	1mil	14	0ea			
	aerosol	110gm	44	1	11	9½	6	6		toilet,	2504	9	6	2	5½	1	3½					2mils	25	0ea		
	puffer	34cc	28	10	7	8½	4	3		bath	2400	13	7	3	6½	1	9½	D	Desert Flower (1131 Shulton)	deodorant spray	1838	45	3	12	2	
	roll-on	50cc	37	3	9	11½	5	6		Cologne	5160	23	10	6	2½	3	7					1701	72	3	19	4
	Chem-Plus (810 Maw)									deodorant aerosol	5121	37	2	9	8½	5	7									
	antiseptic	3oz	16	10	4	8	2	6		Elaine talcum																
	8oz	26	10	7	5	4	0			powder	4503	19	11	5	2½	3	0									
	denture cleanser	18	6	5	1	2	9			Fascination bath				1	1½	7½										
	Chix (672 Johnson)									cubes (4)	5592	4	3													
	disposable nappy									talcum powder	4729	20	6	5	4½	3	1									
	liners	14	0	—						toilet soap	2601	13	0	3	4½	1	9									
	Chloramphenicol (1263 Upjohn) TS									hair cream	5005	17	0	4	5½	2	7									
	aerosol clear	92gm	16	0ea	—	—	—	—		hair grooming	5002	23	10	6	2½	3	7									
	(vet.)									aerosol	5003	39	4	10	3½	5	10									
	gentian violet	114gm	20	0ea	—	—	—	—		Imperial Leather	5004	39	4	10	3½	5	10									
	(vet.)									bath cubes	5590	3	8	11½	6½											
D	Chloretone (938 PD)									shave cream																
	with adrenalin ointment									lather	5080	21	3	5	6½	3	0									
	Chymacort (61 APC) TS									shave foam																
	ointment 14.2gm 10 6ea									aerosol	5081	54	6	14	2½	7	8									
	Chymoral (61 APC)									shaving bowl	2213	40	4	10	6½	5	8									
	tablets	48	29	6ea	—	—	44	3		refill	2206	22	2	5	9½	3	1									
	500 246 8ea				—	—	370	0		shaving stick	2224	16	10	4	4½	2	5									
	Cindico (264 Cindico)									refill	2225	10	7	2	9½	1	6½									
	Baby Bouncer									soap toilet	2098	9	1	2	4½	1	2½									
	exercise harness	45	0ea	—	—	67	6			bath	2081	14	3	3	8½	1	10½									
	Pelican baby's bib	54	0	—	—	6	9			talcum powder																
	Citrolyl (938 PD)										4727	20	6	5	4½	3	1									
D	suspension 80oz										4506	42	2	11	0½	6	4									
	Clinic (509 Gibbs)									shower	4443	30	6	7	11½	4	7									
	shampoo handy									Jacqui bath																
	pack	21	7	5	11	2	11			cubes (4)	5594	4	3	1	1½	7½										
	Colomycin (972 Pharmax) TS									talcum powder																
	injection										4731	23	10	6	2½	3	7									
	500,000 units	10	60	9ea	—	81	0			toilet soap	2604	13	0	3	4½	1	9									
	1,000,000 units	10	86	10 ea	—	115	10			My Fair Lady																
	tablets									hair spray	5470	30	9	8	0½	4	8									
	250,000 units	100	79	5ea	—	105	11			talcum powder																
	1,500,000 units	50	233	0ea	—	310	8				4717	13	7	3	6½	2	1									
	Color-Glo (525 Golden)	32	8	9	0	4	10			pine bath cubes																
	extra life	39	4	10	10	5	10				5520	3	8	11½	6½											
	Color-Match (525 Golden)									pre-electric shave																
	hair colourant	50	8	13	11	7	6				5060	23	10	6	2½	3	7									
D		46	2	12	8	6	10				5061	39	4	10	3½	5	10									
	Comfy (672 Johnson)									Romantica bath																
	disposable nappies	6	14	1½	—	1	6			cubes (4)	5555	4	3	1	1½	7½										
	18	36	11	—	—	3	11			talcum powder																
D	old pack										4732	23	10	6	2½	3	7									
	Compericum (1261 Ucal)									toilet soap	2602	13	0	3	4½	1	9									
	4oz	44	0	12	1	6	2			Spring Blossom																
	8oz	75	0	20	7½	10	9			bath cubes	5517	3	8	11½	6½											
	80oz	42	0ea	11	6½	—	—			Spring Fancy																
	Condition (265 Clairrol)									talcum powder																
	hair conditioner	tube	37	0	10	2	5	6			4723	13	7	3	6½	2	1									
	Contrexeville-Pavillon (653 I&R)									Whitecross baby																
	35	3	S	10	4	4				powder	4094	12	1	3	2	1	1									
D	Cortelan (518 Glaxo)									Wild Ginger																
D	Cortisone (1263 Upjohn) tablets									bath cubes (4)	5593	4	3	1	1½	7½										
	Co-tabs (311 C)									talcum powder																
	P.10 paracetamol	100	38	6	—	—	—			toilet soap	4730	23	10	6	2½	3	7									
	500mgm	250	6	8ea	—	—	—			Wild Lavender	2603	13	0	3	4½	1	9									
	P.32 penicillin V	1000	24	0ea	—	—	—			bath cubes	5521	3	8	11½	6½											
	250mgm TS	100	318	0	—	—	—			Cuticura (1491 Cuticura)	hand cream 100gm	56	2	15	1	4	0									
	Coty (301 Coty)									hand cream	(2 doz)			(2 doz)												
	eye shadow powder									Dactil (824 MCP)	tablets	50	14	6ea	—	21	9									
	evening shades	61	0	16	3	9	0			with phenobarbitone tsis4A	50	15	0ea	4	1½	26	7½									
	hand care cream	296	35	6	9	6	5	3		elixir	100mils	57	0	—	7	1½										
D	hand treatment cream									Daneral-SA (614 Hoechst)	tablets	10	64	0	—	8	0									
D	Cow and Gate (307 C & G)										50	22	8ea	—	34	0										
D	humanised milk food 20 oz.									Day's (358 D&S)																
D	Cravache (Piquet (1253 Turnpenny) existing entry)									Black Drink	2½oz	39	4	13	7	6	3									
	Cravache (Piquet (1446 Pearmoss))									Driffield oils	10oz	68	11	23	2	10	9									
	after shave or toilet										20oz	131	1	44	S	20	6									
	water for men 202	17	0ea	4	8ea	29	6			Etheric ammonia																
	402	27	0ea	7	5ea	48	0			8oz																

[illegible]

of Magnesia (976 PS & T)

Peppermint flavoured	4oz 19 3	5 3½	2 7
8oz 35 4	9 8½	4 9	
em 200 (1441 Wallace)			
em 400 (1441 Wallace)			
ate (1441 Wallace)			
etic (1441 Wallace)			
spray (347 Dalmas)			
ospray (1413 P & S)			
Drop (1507 Paton)			
each purifier	16 0	4 5	2 4
ers (876 MP)			
ir lacquer spray			
enfil sachet 3084	6 9	1 10½	1 0
ms (1154 S & N)			
methocaine			
hydrochlor			
-5% †	20 14 Oea	—	21 0
ropine sulph. 1%	20 14 Oea	—	21 0
sl	20 14 Oea	—	21 0
erine salicylate	20 14 Oea	—	21 0
-5% †	20 14 Oea	—	21 0
orescein sod. 2%	20 14 Oea	—	21 0
matropine hyd.	20 14 Oea	—	21 0
% †	20 14 Oea	—	21 0
oscine hyd.	20 14 Oea	—	21 0
-2% †	20 14 Oea	—	21 0
ocarpine nit.	20 14 Oea	—	21 0
% †	20 14 Oea	—	21 0
rpine (451 F&J)			
arpine (930 P&B)			
Disc (128 Biometica)			
y (1587 RPL)			
odorant talcum			
10oz 31 4	8 2	4 3	
ung Set spray	6oz 31 4	8 2	4 3
ick Set			
eme (286 Colomb)			
hy (871 MCC)			
le bed weedkiller	5 30 0	—	3 9
chets	10 56 0	—	7 0
—A (179 BDH)			
nder 75gm 48 0			
l (1073 Robinson) squares			
otic (1263 Upjohn) TSVPO			
le solution (vet.)			
0 mgm/cc 30cc 6 Oea	—	9 0	
0 mgm/cc 30cc 23 Oea	—	34 6	
edrone (1263 Upjohn) TS			
le lotion 25mils 10 3ea	—	—	
cin (1176 Squibb)			
hate powder 5gm			
ryn (97 Bayer)			
l drops 0.25%			
15mils 31 0	—	3 11	
otosil (938 PD) ointment			
lle (1530 Fisons) TS			
de dressings			
4 10 5 Oea	—	7 6	
(1274 VDL)			
c (1261 Ucal)			
el sickness			
lets 11 6	3 2	1 9	
r (1121 Searle) ts4B			
ts 10mgm 25 33 10ea	—	50 9	
250 299 6ea	—	449 3	
(1164 55L)			
ne 363 37 9	10 2	5 7	
ythene jar 366 36 0	9 8	5 4	
367 51 5	13 10	7 7½	
cane-D (436 Evans)			
utane-D (394 DF)			
rol (436 Evans)			
a (980 Photopia)			
ra 28C	—	252 0	
c (1061 Riker) ts4B			
ts 100 20 8ea	—	31 0	
500 93 Oea	—	139 6	
ic (1061 Riker) ts4B			
ts 100 14 4ea	—	21 6	
500 70 Oea	—	105 0	
n-A (938 PD)			
ts 500			
(810 Maw)			
ing cold cream 18 8	5 2	2 9	
ehold rubber			
es 19 0	2 1	2 6	
ish (810 Maw)			
olair freshener 26 0	—	3 3	
fly killer 26 0	—	3 3	
ic (810 Maw)			
erant aerosol 30 4	8 4	4 6	
ce (1131 Shulton)			
shave lotion			
3502 54 0	14 6	8 5	
calcium 3740 63 9	17 1	9 8	
3540 78 6	21 1	12 2	
one lime 3522 70 3	18 10	10 11	
l 118 (394 DF) ts1DDI			
ts 100 11 8ea	—	17 6	
(16 AGL)			
ts 125	—	559 6	
ts 500	—	979 6	

Ora-jel (1141 Simpkin)

29 3	—	3 6	
Ortho-Novin SQ. (922 Ortho) ts4B			
Dial Pak 21 70 0	—	8 9	
Ostocalcium (518 Glaxo) tablets			
Outdoor Girl (876 MP)			
Brush-on Finish 45 8	12 7	6 9	
mascara			
Brush-Curl-on 25 4	6 11½	3 9	
liquid shadow 25 4	6 11½	3 9	
Owbridges (925 Owbridge)			
(distributors 1545 Vestric)			
Oxatets (311 C) TS			
capsules 100 30 Oea	—	—	
1000 228 Oea	—	—	
tablets 100 30 Oea	—	—	
1000 228 Oea	—	—	
D Oxo (926 Oxo) existing entry			
I Oxo (926 Oxo)			
liquid 2oz 21 6	—	2 2	
4oz 39 8	—	4 0	
8oz 69 3	—	7 0	
16oz 126 5	—	12 9	
Panadol (97 Bayer)			
tablets 500 22 4ea	—	33 6	
2500 110 6ea	—	165 9	
Parke-Davis (938 PD)			
bronchial lozenges metholated			
D Pharmaceutyl (417 EPL)			
100 106 0	29 0	14 3	
Paroven (1493 Zyma)			
tablets 20 14 Oea	3 10½ea	24 10½	
100 60 Oea	16 6ea	106 6	
Pasinah-D (1303 Wander) TS			
paediatric 60 23 6ea	—	35 3	
Paskallium (521 Glenwood)			
tablets 0.5gm 1000 62 11ea	—	23 10	
Paterson (673 J of H)			
Acuspeed FX-20			
develop 8oz —	—	5 6	
20oz —	—	11 0	
40oz —	—	19 0	
enlarging computer	—	105 0	
Paxidorm (1301 WYM) ts4B			
tablets 50 7 6ea	—	—	
D Pelican (264 Cindco)			
see under Cindco			
Penbritin (1393 BRL) TS			
capsules 20 22 9ea	—	34 1½	
250mgm 100 109 6ea	—	164 3	
500 529 6ea	—	794 3	
500mgm 200 43 9ea	—	65 7½	
100 210 Oea	—	315 0	
injection 100mgm vial 2 5ea	—	3 7½	
250mgm vial 4 1ea	—	6 1½	
500mgm vial 6 7ea	—	9 10½	
syrup 125mgm/5mils 60mils 9 8ea	—	14 6	
5mils 60mils 18 Oea	—	27 0	
tablets 125mgm 20 13 6ea	—	20 3	
100 62 6ea	—	93 9	
Penbritin K.S. (1393 BRL) ts4B			
powder for suspension 60mils 8 7ea	—	13 1½	
Peptacol 10 (972 Pharmax) ts1s4A			
tablets 20 4 9ea	—	6 4	
200 40 4ea	—	53 4	
Peptacol 20 (972 Pharmax) ts1s4A			
tablets 20 5 6ea	—	7 4	
200 47 Oea	—	62 8	
Persomnia (67 Ashe)			
tablets 12 18 0	—	2 3	
27 36 0	—	4 6	
Personna (438 ER)			
razor "Lady Personna"	50 8	14 0	7 6
Philippe Venet (1438 Inter-CC)			
Venet Madame or Venet Mademoiselle			
eau de toilette 2oz —	—	42 0	
4oz —	—	63 0	
8oz —	—	105 0	
16oz —	—	168 0	
perfume 2oz —	—	94 6	
4oz —	—	147 0	
1oz —	—	252 0	
Philips (977 PE)			
Philishave-3			
5C8130 131 2ea	35 2ea	210 0	
shaver Traveller			
cordless 72 1ea	19 5ea	115 6	
Phospholine Iodide (802 M5) ts1			
vial 3mgm 17 6ea	—	26 3	
6-25mgm 19 6ea	—	29 3	
12-5mgm 22 6ea	—	33 9	
Phospho-soda (49AF)			
6oz 65 0	17 10½	8 9	
Photopia (980 Photopia)			
binoculars 7 x 35 —	—	229 9	
7 x 50 —	—	273 10	
8 x 30 —	—	218 9	
8 x 40 —	—	240 9	
10 x 50 —	—	277 10	
12 x 50 —	—	288 4	
16 x 50 —	—	299 7	
20 x 50 —	—	310 7	
7 x 35w/a —	—	343 4	
8 x 40w/a —	—	378 7	

Physeptone (208 BW) ts1DD

injection 10mgm mil	5 2 6ea	—	3 9
10 —	—	—	—
PIB (859 Moore)			
pressurised inhalant 108 0	—	—	13 0
refill —	—	—	—
PIB Plus (859 Moore) †			
pressurised inhalant 134 0	—	—	16 0
refill —	—	—	—
Pinoletta (1030 Ravika)			
bubble bath 1lb 67 0	17 0	9 6	
Pino Silvestre (1201 Supervitie)			
after shave lotion 30cc 69 0	19 0	10 9	
50cc 81 0	22 3	12 6	
100cc 129 0	35 6	20 0	
200cc 19 Oea	5 3ea	35 6	
400cc 32 Oea	8 9½ea	60 0	
deodorant stick 44 0	12 1	6 9	
large 75 0	20 7½	11 9	
foam bath 70gm 30 0	13 9	7 9	
140gm 81 0	22 3	12 6	
230gm 144 0	39 7	22 6	
pre-shave lotion 50cc 69 0	19 0	10 9	
shave cream lather 42 0	11 6½	6 9	
aerosol 81 0	22 3	12 6	
talcum powder 150gm 69 0	19 0	10 9	
D Pitocin (938 PD) existing entry			
I Pitocin (938 PD) ts4B			
ampoules 0.5mils 10 8 8ea	—	13 0	
100 76 Oea	—	114 0	
1-0mils 10 9 2ea	—	13 9	
100 80 8ea	—	121 0	
10 18 6ea	—	27 9	
100 133 4ea	—	200 0	
Pitressin (938 PD) ts4B			
ampoules 1-0mils 10 160 0	—	20 0	
D 0.1mil 6, 12 and 50 —	—	—	
Pituitrin (938 PD) ts4B			
ampoules 1-0mil 10 112 0	—	14 0	
D 1-0mil 6, 12 and 50 —	—	—	
Plus (1565 P. Plus)			
cubeflash —	—	24 10	
Polycol (894 Nicholas)			
gel 12oz 89 0	22 7	13 1	
Polytar (1191 Sciefel)			
liquid 65mils 45 0	12 5	6 8	
Ponderax (1123 SLL) ts4B			
(distributors 1536 Farillon)			
tablets 100 35 Oea	—	52 6	
500 169 Oea	—	—	
D old packs			
Ponoxylan (1320 WSP)			
derm 45gm 66 0	18 0	9 9	
Possession (Cordey (813 MF))			
talcum 100 0	23 9	14 8	
D Prepacol (349 Damancy)			
I Prepacol (894 Nicholas)			
D Pretty Feet (1164 55L)			
I Pretty Feet (1113 S & B)			
Professional (810 Maw)			
toothpaste standard 13 8	3 9	2 0	
large 22 3	6 1	3 3	
Propaderm (34 A & H) TS			
cream 15gm 7 6ea	—	11 3	
50gm 19 8ea	—	29 6	
15gm 7 6ea	—	11 3	
30gm 19 8ea	—	29 6	
Propaderm-A (34 A & H) TS			
ointment 15gm 8 6ea	—	12 9	
50gm 21 8ea	—	32 6	
R Provera (1263 Upjohn) ts4B			
tablets 5mgm 20 17 Oea	—	—	
100mgm 100 71 Oea	—	—	
100 232 4ea	—	—	
Quickies (451 F & J)			
skin cream 12 11	3 7½	1 11	
20 3	5 7	3 0	
Quinasp (1457 PP Ltd) †			
capsules 12 30 0	8 3	4 6	
Rank (1027 Rank)			
slide projector Duo-Scope	—	720 0	
D Rantur (67 Ashe)			
Rauwiloid + Veriloid (1061 Riker) ts4B			
tablets 100 35 8ea	—	55 0	
500 175 4ea	—	263 0	
D Rectalad (369 DL) existing entry			
I Rectalad (369 DL)			
miniature enema 5cc 46 0	—	—	
(2 doz)	—	—	
paediatric 33 0	—	—	
(2 doz)	—	—	
D Regent (604 HMC) existing entry			
I Regent (604 HMC)			
binoculars 8 x 30 —	—	120 0	
case —	—	28 3	
8 x 40 —	—	138 0	
case —	—	31 11	
7 x 50 —	—	150 0	
case —	—	35 6	
10 x 50 —	—	157 6	

[illegible]

alestine (653 I & R)	34 6	5 8	2 2
bottles	(2 doz)	(2 doz)	
	49 6	8 2	3 3
	(2 doz)	(2 doz)	
	35 3	5 10	4 4
rande-Grille (653 I & R)	35 3	5 10	4 4
opital (653 I & R)	35 3	5 10	4 4
et (1253 Turnpenny) existing entry)			
et (1446 Pearmoos)			
ne	1oz 12 9ea	3 7ea	22 10
	1oz 30 3ea	8 5ea	54 0
	1oz 43 2ea	11 11ea	76 6
	1oz 61 11ea	17 1ea	110 0
	2oz 104 2ea	28 8ea	184 6
	4oz 190 9ea	50 0ea	336 0
water	2oz 18 6ea	5 0ea	32 0
	4oz 28 0ea	7 9ea	49 0
	8oz 44 0ea	11 7ea	79 0
	16oz 72 6ea	20 1ea	129 0
	32oz 106 0ea	29 2ea	188 0
te (1530 Fisons)			
rinse sachet	6 3	1 9	10
bottle	18 10	5 2	2 6
pray	25 8	7 1	3 6
	50 10	14 0	6 11
	16oz 69 8	19 2	9 6
te (1530 Fisons)			
rinse sachet	6 3	1 9	10
bottle	18 10	5 2	2 6
pray	25 8	7 1	3 6
	50 10	14 0	6 11
	16oz 69 8	19 2	9 6
te (1530 Fisons)			
rinse sachet	6 3	1 9	10
bottle	18 10	5 2	2 6
pray	25 8	7 1	3 6
	50 10	14 0	6 11
	16oz 69 8	19 2	9 6

single	60x30	—	—	122 6
double	60x48	—	—	170 4
qual control	60x48	—	—	215 1
three heat	60x30	—	—	150 8
single	60x30	—	—	239 7
double	60x48	—	—	
five step control	—	—	—	63 0
unit	—	—	—	77 6
table lamp model	—	—	—	
Waxsol (896 NL)	—	—	—	
ear drops	15mils	42 0	—	5 3
Wellcome (208 BW)	—	—	—	
semen diluent (vet.)	—	—	—	
Windsor (1070 Windsor)	—	—	—	
bath crystals	1222	—	—	
soap luxury	1202	—	—	
Winlam (615 H & M)	48 0	13 3	7 1½	
Wiz-Set (888 Newey)	—	—	—	
heated hair curlers	—	—	—	19 6
Woltz (128 Biometica)	—	—	—	
nail enamel brilliant	49 11	13 5	7 6	
Wotan (13 AEG)	—	—	—	
health lamps	—	—	—	33 6
Theratherm	—	—	—	98 6
Ultravitalux GUP53	—	—	—	
Yardley (1355 Yardley)	—	—	—	
velvet skin	—	—	—	
moisturiser	57 0	15 8	8 6	
Zizanie de Fragonard (1438 Inter-CC)	—	—	—	
after shave	4oz	—	—	39 6
eau de toilette	5oz	—	—	49 6
	8oz	—	—	69 6
	18oz	—	—	126 0
Zobec (572 Johnson)	—	—	—	
gauze swabs	—	—	—	
2x2in	100 33 0	—	—	
3x3in	100 57 9	—	—	
4x4in	100 101 0	—	—	
Zymafluor (1493 Zyma)	—	—	—	
tablets	150 24 0	7 0	3 7	

AMENDMENTS AND ADDITIONS TO KEY TO SUPPLIERS

- 13 AEG=AEG (Great Britain) Ltd., 27 Chancery Lane, London, W.C.2. 01-242-9944.
- 152 Bovril=Bovril, Ltd., Southbury Road, Enfield, Middlesex.
- 160 Bliss=Bradley & Bliss, Ltd., Kings Road, Reading, Reading 40302.
- 264 Cindico=Cindico Products, Ltd., Albion Street, Driffield, Yorks. Driffield 3434.
- 451 F & J=Fassett & Johnson Ltd., 96 De Beauvoir Road, London, N.I. Spanton 0055.
- 576 PH=Philip Harris Medical Ltd., Hazelswell Lane, Salford, Birmingham, 30. 021-458-2020.
- 671 Jeyes=Jeyes-Parazone Sales, Ltd., River Road Barking, Essex. Roperway 1131.
- 725 Lanalol=Lanalol, Ltd., 96 De Beauvoir Road, London, N.I. 01-249 0055.
- 794 MHC=Mansell Hunt Catty & Co. Ltd., Cressy Road, London, N.W.3. Gulliver 3484.
- 888 Newey=Newey Goodman Ltd., Robin Hood Lane, Hall Green, Birmingham, 28. Smirley 6681.
- 1108 Sarakan=Sarakan Products Ltd., 43 Sunningdale Avenue, Leigh-on-Sea, Essex. Southend 74719.
- 1227 THP=Three Hands Products, Ltd., River Road Barking, Essex. Roperway 1131.
- 1234 TCR=Tidebrook Chemical Products, Ltd., P.O. Box 413, 19 Grange Road, London, S.E.1. Bermondsey 4525.
- 1347 WE=Wood, Bastow (Elastics), Ltd., Victoria Road, Pinxton, Notts. Pinxton 308.
- 1378 CD=C. D. Indicators, 31 Queen Anne's Gate London, S.W.1. Whitehall 5711.
- 1397 P de LL=Parfums de Lucien Lalong, Ltd., 96 De Beauvoir Road, London, N.I. Spanton 0055.
- 1438 Inter-CC=Inter Continental Cosmetics, 31 St. George Street, London, W.1. Grosvenor 1523.
- 1446 Pearmoos=Pearmoos, Ltd., 31 George Street London, W.1. 01-935-6440.
- 1546 Sheranel=Sheranel, Ltd., Rodley, Leeds, Yorks. Pudsey 76683.

THIS WEEK'S CHANGES

Prices are given in the sequencia Trade Price per Doz.; Purchase Tax per Doz.; Retail Price. Bold upright figures (2 9) in the retail price column indicate that the price is subject to resale price maintenance; italic figures (2 9) that it is recommended by the manufacturers; and light upright figures (2 9) that it is "notional" as a guide to the retailer in determining his own retail price.

(1320 WSP) ts1			
(859 Moore)			
	50 12 0ea		
	250 54 6ea		
(1525 PDP)			
oil	1oz 30 0ea	8 1ea	55 0
	2oz 45 9ea	12 3ea	84 0
g powder	3oz 32 9ea	8 10ea	60 0
	5oz 16 0ea	4 5ea	29 0
standard	3oz 7 6ea	2 0ea	14 0
xe	3oz 23 0ea	6 2ea	42 0
xe powder	3oz 11 6ea	3 1ea	21 0
t (265 Clairol)			
oo sachet	20 3	5 3	1 0
	(3doz)	(3doz)	
te (837 MSD) ts43			
ec (938 PD)			
rt pads	40 0ea	4 5ea	64 5
s (312 AC)			
	42 26 0	—	4 6
ast (1155 S & N)			
ip tin	7920 13 1	—	1 6
	7921 21 7	—	2 6
	7922 34 6	—	4 0

D	old packs	—	—	—
	Gala (876 MP)	—	—	—
•	matts velvet	52 5	14 5	7 9
•	Lancome (726 Lancome)	—	—	25 6
•	Hal-bronze	—	—	—
<div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>A = Price Advanced R = Price reduced • = New entry D = Defecta C = Correction I = Insert</p> </div>				
•	Hal-filtra	—	—	18 3
•	Hal-sport	—	—	25 5
D	Filtre Solaire	—	—	—
D	Sunaport	—	—	—
•	Laryncol (835 M & J)	—	—	—
	throat spray metered	44 2	—	4 11

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hair spray for men 36 0 9 11 5 4
- Mary Quant (876 MP)
loads of lash (3 pair) 136 0 — 42 0
- Morry (862 Morry)
beauty foam bath 4oz — — 8 9
- Racasan (1022 Racasan)
Blue Flush 32 2 11 3 11
refill 24 6 — 2 11
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